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MANUAL

OF

ATHLETIC REQUIREMENTS

UNITED STATES NAVAL ACADEMY

LIEUTENANT-COMMANDER W. A. RICHARDSON,
U. S. NAVY

ANNAPOLIS, MD.
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William Augustus Richardson, '10

"No game was ever yet worth a rap,
For a rational man to play,
Into which no accident, no mishap,
Could possibly find its way."

PREFACE

This second edition of the Manual of Athletic Requirements has been revised and enlarged under my personal direction while Gymnasium Officer, U. S. Naval Academy.

The author wishes to acknowledge most valuable assistance from the following:

Mr. Walter Aamold who directly edited and arranged the subject matter.

Mr. Robert Bennett, who as representative of White Studio, contributed all the revised pictures.

The co-authors who contributed fundamental material as designated at the head of the various sports herein.

WILLIAM A. RICHARDSON
Lieut.-Commander, U. S. Navy.

FOREWORD TO MIDSHIPMEN

An Officer's First Duty.—The first duty an ensign usually performs independently after his sea assignment is going ashore with swimming parties or leading a division in Setting-Up Exercises. All officers are closely associated with their men the first ten years of their career and they find that their men are intensely interested in all forms of athletics. Officers are constantly interrogated concerning sports, training for the same, uniform worn and comparison of records (amateur and professional).

Importance of Swimming.—Every ensign should be an excellent swimmer and able to rescue persons helpless in the water, and to correctly apply resuscitation to the apparently drowned.

Leadership Through Athletics.—There is no better method by which an officer can acquire a correct understanding of his men than that of leading in athletics. An officer who has been famous in athletics while at the Academy is held in great respect by young men, and will more readily obtain an efficient division on this account.

Military Bearing.—It must be kept in mind that the correct giving of commands as in infantry, artillery, turret, boat drill, etc., cannot be done without experience and thought. To this end the athletic training and physical development of the midshipmen are closely interwoven in the organization of gymnasium work.

Importance of Team Work.—The team work of the fire control and turret, the bridge of a destroyer or depth of a battleship, is the same as that of the football team, or the crew.

Athletic Spirit.—Special stress is placed on the spirit of "good sportsmanship" under all conditions. It is our aim to develop in all midshipmen sterling health and a well rounded physical condition and to give knowledge of physical training in all recognized sports. An outline of coaching has been included to indoctrinate officers in the ability to coach and lead the personnel of the fleet in physical development.

To Instructors.

In teaching the text of this manual instructors must keep in mind that their mission is to mould midshipmen under their care into efficient and well trained officers. Instructors must work conscientiously and should set an example of manly qualities and fair play, plus the performing of all

exercises with precision and accuracy. Physical training has proved a most efficient means to the development of discipline. One in authority need never be afraid to properly exercise discipline, though it be known under the name of enthusiasm or a willingness to follow a good example.

The instructors of this corps are herein intrusted to develop the spirit and qualities aimed at by this department, and full confidence is reposed in their good judgment and leading spirit.

INTRODUCTION

This manual is prepared with the view of making it answer the athletic needs of the Naval Academy for the present, but is arranged so that each subject has an outline for further study in case more time is assigned to this department.

The arrangement of the different tests is made with the following object in view:

The C test, or test given fourth classmen, is arranged so that each fourth classman will have a definite standard to work to, and to give an outline of accepted college sports.

The B test, or test given third classmen, is a continuance or enlargement of the subject along the lines of the C test.

The A test, or second class test, is the completion of all athletic work not grouped under electives.

Electives are for first classmen, and cover the various athletic subjects from a coach's point of view. This will enable a midshipman to select and study his favorite sport and thus go to the fleet as a capable coach. It is not expected that midshipmen can learn to coach all the different sports; perhaps two sports should be taken up, one indoor and one outdoor subject.

The value of coaches in the fleet is shown by the constant calls received in this department for midshipmen who are capable athletic coaches.

It should be recognized that it takes personality, ability to handle men and a forceful character to be able to coach athletics successfully. If a young officer has by nature and training traits of leadership, so necessary for a coach to have, he will become a good coach without difficulty. Without these qualities his personal excellence in a sport will not assure him of success as a coach. The coach must be a real leader, nothing short of leadership will serve in athletic competition.

CLASSIFICATION OF TESTS

CLASSIFICATION OF TESTS

1. **Grouping of Requirements.**—All requirements in physical training are grouped under the following heads:

PHYSICAL TRAINING

I Strength Requirements.
II Gymnasium Requirements.
III Swimming Requirements.

2. **Physical Training.**—When midshipmen are considered in all of the groups I, II, and III, they will be placed under the first head, Physical Training.

3. **I Strength Requirements.**—This includes all tests on strength testing machines, defects in muscles, weight, etc. In addition, during the fourth year posture is a requirement under this head, passing into group II, the following year.

4. **II Gymnasium Requirements.**—This group includes tests in football, baseball, crew, track and field, basketball (excludes swimming), boxing, wrestling, lacrosse, fencing, gymnastics, water polo, tennis, soccer, hand ball, training, practical gymnasium, setting-up exercises, companion exercises, rough and tumble, and leadership. In addition after fourth class year posture is carried under this head.

5. **III Swimming Requirements.**—Under this head the requirements in swimming are carried. Swimming includes the various strokes, methods of resuscitation and life saving.

6. **Publishing of These Groups.**—All orders, notices, memoranda, or lists relating to deficiencies, examinations, or requiring midshipmen for purposes of physical training will be found under one of the four heads given in paragraph 1.

7. **Grading of Tests.**—The tests required under the above-mentioned groups have been graded according to a midshipmen's year at the Academy:

Class C required of all fourth classmen.
Class B required of all third classmen.
Class A required of all second classmen.

Examples of requirements under C, B, and A:

(1) Fourth Class—At the end of the second quarter of the Academic year midshipmen of the fourth class must have qualified:

C test in I Strength Requirements.
C test in III Swimming Requirements.

Under II Gymnasium Requirements completion of C tests will not be required until the end of the second quarter of following Academic year.

(2) Third Class—At the end of the second quarter of the Academic year midshipmen of the third class must have qualified:

B test in I Strength Requirements.
C test in II Gymnasium Requirements.
B test in III Swimming Requirements.

(3) Second Class—At the end of the second quarter, and not later than May 15, midshipmen of second class must have qualified:

A test in I Strength Requirements.
B & A tests in II Gymnasium Requirements.
A test in III Swimming Requirements.

(4) First Class—There are no requirements other than posture and general physical excellence for the first class. Electives have been arranged so that first classmen may take up the study of coaching.

All tests must be completed by the end of the second class year. Midshipmen who do not pass their tests at the required time will be considered deficient in subjects not completed for their class.

I. STRENGTH REQUIREMENTS

8. Basis of Tests.—The strength examination is a measurement of strength of 42 different muscle groups based on the individual's height. The standard pull for each muscle is based on the study of 2,000 midshipmen examined at the Academy in 1910-1911, and revised to date.

9. Strength Test.

C	Ability to pass in 32 muscles. (Allowing 10 defects or under) Correct posture at attention.	Required of 4th class.
B	Ability to pass in 36 muscles. (Allowing 6 defects or under)	Required 3d class.
A	Ability to pass in 42 muscles. (No defects allowed)	Required 2d class.

10. Corrective Exercises for Defective Muscles.—O Spirometer: Take correct posture, Par. 820, breathe deeply, taking breathing exercises at an open window from three to five minutes, two or three times a day.

Practice swimming, submerging as far as possible holding the breath. Long distance running at a slow pace, breathing with diaphragm and chest, taking breath through nose. Join track or swimming squad.

1 & 2. Right and Left Grip: Practice swinging exercises on the horizontal bar and rings. Hand on horizontal ladder, arm-walking on the rounds and rails of the ladder. Climb rope without use of legs. Come out for crew or gymnasium squad. Exercise at machines Nos. 1 or 2.

3 & 4. Right and Left Deltoid: Practice dips on parallel bars and shoulder stands with arms sagging and raising. Join baseball or lacrosse squad. Exercise on machine No. 6.

5 & 6. Right and Left Forearm Extensor: Balance hanging exercises on side horse. Low horizontal bar at chest height, take an under grip and fall towards the bar then extending arms so that the strain is on the forearms. Exercise on rings and parallel bars. Use machines 3, 5, and 19.

7 & 8. Right and Left Latissimus Dorsi: Lie on parallel bars in arm hanging position swinging forward and backward, allow the body to sag downward and then force the upper arm down raising the body upward again. This may also be done from the upper arm hanging position with the body vertical and in good form, head erect, back arched, knees straight and toes pointed. Practice the upper arm kip. Exercise at dip swings on the end of horizontal bars.

9 & 10. Right and Left Forearm Flexors: Practice hanging position on the high horizontal bar under and over grip. Exercise at chinning. Arm-walk in hanging position on the horizontal ladder, also rope climbing without the use of legs. Use machines 3, 6, & 19.

11, 14, 13, & 12. Right and Left Forearm Supinators, Right and Left Forearm Pronators: Exercise with light dumb-bells. Arms twisting as fast as possible, and as far to right and left as possible. Machine 4.

15, 16, 17, & 18. Right and Left Shoulder Retractors, Right and Left Pectorals: Exercise on parallel bars from position of upper arm stride. Lying position, lower and raise the body with the upper arms. Upper arm kip and dips on swings. Exercise at wrestling. Machines 3, 5, & 18.

19 & 20. Right and Left Foot Flexors: Exercise on horizontal bar, body inverted. Toe hanging. Insert toes under first round of the wall bars and with arm support allow the body to fall backward, putting the strain on the feet. Use machine No. 8.

21 & 22. Right and Left Foot Extensors: Heels raising with weights in hands. Running on the toes. Exercise on bicycle machines. Climb stairs. Take up boxing. Use machines 10 & 14.

23 & 24. Right and Left Thigh Flexors: Practice hanging on the wall bars. Knee up-bending and knee stretching downward. Lunge in fencing. Machines 10, 12 & 14.

25, 26, 27 & 28. Right and Left Flexors, Right and Left Leg Extensors: Take a kneeling position on a bench at wall bars, insert toes so that legs are horizontal, then let trunk fall backward and trunk stretching upward and then falling forward as far as possible. Use machines 10 & 14.

29 & 30. Right and Left Thigh Extensors: From the standing position heels raising and knees bending, also knees bending to sitting. Do the deep knee bending and stretching exercises on one leg with the other leg extended forward. Lunge in fencing right and left. Use machines Nos. 10 & 12.

31 & 32. Right and Left Thigh Adductors: Exercise on parallel bars in stride sitting position with body erect, press the thighs together and do stride travel forward. Use frog or breast stroke kick in swimming. Scissors in wrestling. Use machine 12.

33 & 34. Right and Left Thigh Adductors: Do inverse hang on parallel bars with legs apart so that the thighs are wedged between the bars. Keep the legs well spread to prevent falling. Practice thigh roll. Leg parting in side fall position. Use machine 12.

35. Trunk Posterior: Raise a heavy weight from the floor with the knees straight, bending body at hips only, keeping back well arched with arms straight.

36, 37, 38 & 39. Neck Anterior, Neck Posterior, Neck Right Lateral, Neck Left Lateral: Use wrestler's bridge, rocking backward, forward and sideways, using arm support at first until the neck gets strong enough for exercise without arm support, at which time the hands should be placed on the hips. Use machines 9, 11, & 14.

40. Trunk Anterior: Sitting position on the bench at wall bars. Insert feet between rounds of wall bars so that legs are horizontal, then practice trunk stretching upward and trunk bending forward. Hang on wall bars and raise the legs forward. In the lying position practice trunk bending forward with the hands on hips. Use machines 3, 13 & 17.

41 & 42. Trunk Right and Left Laterals: Take side lying position on the bench at the wall bars. Insert the feet between the rounds so that body will be in a horizontal position. Practice trunk bending sideways, left and right. Machines 16 & 17.

11. Recording of Tests.—All tests under I STRENGTH REQUIREMENTS are kept in office of Gymnasium Medical Officer. Midshipmen should refer to their test cards from time to time.

12. Records of Tests.—A blank I STRENGTH REQUIREMENT card is printed herein, on which midshipmen will keep a duplicate copy of their examinations.

13. Posture.—During a midshipman's fourth class year at the Academy his records of posture are kept by the medical officer under this requirement. The following years of posture come under the observation of the instructors in physical training and posture is therefore transferred to II GYMNASIUM REQUIREMENT card for B and A tests.

STRENGTH REQUIREMENTS

NAME ..... AGE ..... Class .....

	DATE.....														Higher Number
	Height (inches)	62	63	64	65	66	67	68	69	70	71	72	73	74	
	Weight (pounds)	120	125	130	135	140	143	146	150	155	160	165	170	175	200
	Spirometer (cu. inches)	210	220	228	236	244	252	260	268	275	284	292	300	310	400
Arm Muscles	Right Grip	90	95	100	105	110	115	120	125	130	135	140	145	150	190
	Left Grip	85	90	95	100	105	110	115	120	125	130	135	140	145	180
	Right Deltoid	45	46	49	50	52	54	55	56	58	60	62	64	65	110
	Left Deltoid	40	42	44	45	46	48	50	52	54	55	57	59	60	105
	Right Forearm Extensor	40	43	45	48	50	53	55	58	60	63	65	68	70	140
	Left Forearm Extensor	40	42	44	45	46	48	50	52	55	58	60	63	65	100
	Right Latissimus Dorsi	100	102	105	110	115	120	122	125	130	135	138	140	145	280
	Left Latissimus Dorsi	95	100	102	105	110	115	120	122	125	130	133	135	140	300
	Right Forearm Flexor	55	56	58	60	62	64	65	68	70	72	75	78	80	145
	Left Forearm Flexor	50	54	55	58	60	62	64	65	68	70	72	74	75	130
	Right Forearm Supinator	40	43	45	48	50	53	55	58	60	63	65	68	70	125
	Left Forearm Pronator	35	38	40	42	44	45	48	50	52	55	56	58	60	115
	Right Forearm Pronator	40	42	44	45	48	50	52	54	55	57	60	62	65	120
	Left Forearm Supinator	40	42	45	48	50	52	55	58	60	62	65	68	70	110
	Right Shoulder Retractor	50	53	55	56	58	60	62	65	66	68	70	72	75	155
	Left Shoulder Retractor	45	48	50	51	53	55	58	60	61	63	65	68	70	150
	Right Pectoral	65	68	70	73	75	78	80	83	85	88	90	93	95	180
	Left Pectoral	60	63	65	68	70	73	75	78	80	83	85	88	90	170
	Total Strength Arms	1015	1067	1111	1157	1204	1255	1301	1349	1394	1447	1493	1543	1590	

(*Card continued to next page*)

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	Left Grip.....	85	90	95	100	105	110	115	120	125	130	135	140	145	180
	Right Deltoid.....	45	46	49	50	52	54	55	56	58	60	62	64	65	110
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	Right Forearm Flexor....	55	56	58	60	62	64	65	68	70	72	75	78	80	145
	Left Forearm Flexor.....	50	54	55	58	60	62	64	65	68	70	72	74	75	130
	Right Forearm Supinator.	40	43	45	48	50	53	55	58	60	63	65	68	70	125
	Left Forearm Pronator...	35	38	40	42	44	45	48	50	52	55	56	58	60	115
	Right Forearm Pronator..	40	42	44	45	48	50	52	54	55	57	60	62	65	120
	Left Forearm Supinator...	40	42	45	48	50	52	55	58	60	62	65	68	70	110
	Right Shoulder Retractor.	50	53	55	56	58	60	62	65	66	68	70	72	75	155
	Left Shoulder Retractor...	45	48	50	51	53	55	58	60	61	63	65	68	70	150
	Right Pectoral.....	65	68	70	73	75	78	80	83	85	88	90	93	95	180
	Left Pectoral.....	60	63	65	68	70	73	75	78	80	83	85	88	90	170
	Total Strength Arms. ...	1015	1067	1111	1157	1204	1255	1301	1349	1394	1447	1493	1543	1590	

(*Card continued to next page*)

| | | |

POSTURE—AT ATTENTION

	ERROR
1. Head Up, Neck Vertical, Chin In	
2. Eyes Straight to the Front	
3. Shoulders Square, Evenly Balanced, Falling Naturally	
4. Chest Out	
5. Arms Straight Downward	
6. Abdomen In	
7. Hips Back	
8. Knees Together	
9. Heels Together, Feet Turned Outward Equally, Forming an Angle of Forty-five Degrees	

Note: Midshipmen of fourth class are required to pass the test given above to satisfaction of Gymnasium Medical Officer. Record of defects will be kept hereon, and midshipmen will not be considered as having passed C test I Strength Requirements until they have demonstrated a correct posture in addition to having passed in 32 muscles.

Posture for midshipmen, third, second and first classes, is carried on II Gymnasium Requirements Card.

14. Basis of Tests.—Tests under this heading are given in full in tests C, B, and A, of different sports and requirements. See paragraphs 25 to 1124.

15. Definition of Tests.—The II GYMNASIUM REQUIREMENT TESTS embrace all the various sports and requirements, and should not be confused with PRACTICAL GYMNASIUM TESTS, which are tests of movement to determine the practical use of muscles. (I STRENGTH REQUIREMENT Test determines whether or not midshipmen are up to a normal standard in strength of muscles, while PRACTICAL GYMNASIUM TESTS determine ability to use these muscles.)

16. Practical Gymnasium Tests.—These tests embrace the bar vault, standing broad jump, running high jump, dips on parallel bars, chins on horizontal bars, rope climbing, make fast on single rope, short horse, throwing medicine ball, mounting on shelf, running 440 yards, horizontal bar, wall bars, and tumbling. Any midshipman who can pass the I STRENGTH REQUIREMENTS, should with a little practice, be able to pass the Practical Gymnasium Test, provided he has control of his muscles.

17. Recording of Tests.—All tests under II GYMNASIUM REQUIREMENTS are recorded on a card designed for that purpose which is kept in the Gymnasium Officer's Office. Midshipmen should keep posted as to the status of their card by examining their card from time to time.

18. Midshipmen to Keep Records.—A blank II GYMNASIUM REQUIREMENT card is printed herein, on which a midshipman will keep his record up to date.

19. Posture. – For midshipmen, third and second classes, posture is carried under this requirement. Midshipmen fourth class are grouped under I Strength Requirements.

II GYMNASIUM REQUIREMENTS

Name ..... Class .....

	4 C	3 B	2 A	1 *
1 Football	..	....	....	....
2 Baseball	....	....	....	....
3 Crew	....	....	....	....
4 Track & Field	....	....	....	....
5 Basketball	....	....	....	....
6 Swimming	III	Swim.		Req
7 Boxing	....	....	....	....
8 Wrestling	....	....	....	....
9 Lacrosse	....	....	....	....
10 Rifle	X	X	X	
11 Fencing	....	....	....	....
12 Gymnastics	....	....	....	....
13 Water Polo	....	....	....	....
14 Tennis	....	....	....	....
15 Soccer	....	....	....	....
16 Hand Ball	....	....	....	....
17 Golf	....	....	....	....
.....	....	....	....	....
.....	....	....	....	....
.....	....	....	....	....

PRACTICAL GYMNASIUM TESTS.	4 C	3 B	2 A
Posture	†		
Training	....	....	....
Bar Vault	....	X	X
Standing Broad Jump	....	....	....
Running High Jump	....	....	....
Dips on Parallel Bars	....	....	....
Chins on Horizontal Bar	....	....	....
Rope Climbing	....	....	....
Make Fast on Single Rope	....	X	X
Short Horse	....	....	....
Throwing Medicine Ball	....	....	....
Mounting on Shelf	....	X	X
Running 440 yards	....	....	....
Horizontal Bar	....	....	....
Wall Bars	....	....	....
Tumbling	....	....	....
Setting-up Exercises	....	....	....
Companion Exercises	....	X	X
Rough & Tumble	....	....	....
Leadership	....	....	....

*Electives for First Class.
†See I Strength Requirements.

ATHLETIC RECORD BEFORE ENTERING ACADEMY

(To be filled out with a soft lead pencil.)

Signature..... Appointed from.....
(Write clearly, give name in full) (State and City)

Age..... Weight..... Height.....
(Nearest year) (On entering) (In inches)

Have you ever taken part in any of the sports numbered on the reverse side of this card?.....

.....
(State what sports)

In what capacity?.....
(School, positions played, length of time)

Have you ever made a letter, or played on a championship team?.....

.....
(Give character of award, such as block letter, numerals, etc. Give name of team, school and year)

Have you ever been injured in athletics?.....
(State injury, such as fractured elbow, etc.)

What branch of athletics do you wish to try while a Midshipman?.....

.....
(Name outdoor and indoor sports)

NOT TO BE FILLED IN BY MIDSHIPMAN

Organized Athletics Midshipman Actually Took Part In---

4th Class year.....

3d Class year.....

2d Class year.....

1st Class year (Elective).....

(BACK OF CARD)

III SWIMMING REQUIREMENTS

20. Basis of Tests.—Swimming requirements are under two heads:

PRACTICAL SWIMMING
SWIMMING AS A SPORT

Under Practical Swimming midshipmen are required to qualify so as to save themselves in the water, to aid others from drowning, and to give efficient resuscitation to persons apparently drowned.

Under swimming as a sport is grouped information regarding swimming meets, organizations, records, etc.

21. Midshipmen to Keep Records.—A blank III SWIMMING REQUIREMENTS card is printed herein, for use of midshipmen in keeping their own swimming records. These records must be kept up to date.

22. Outline of Tests.—An extract of Practical Swimming tests is shown by printed card herein.

III SWIMMING REQUIREMENTS

Name.....

Class.	Date Qualified	Required of
E.		
D.		
C.		4 Class.
B.		3 Class.
A.		2 Class.

Special Qualifications*.....

*Elective First Class—Red Cross—Swimming Team.

E. Cannot keep afloat.

D. Can keep afloat.

Signature of Midshipman.

C. Swimming or keeping above the water for five minutes. Demonstrating the Breast, Side and Back Strokes.

B. Swimming 120 yards in three minutes and thirty seconds, using the Breast, Side and Back Strokes, each for 40 yards. Diving into the water and raising an object from the bottom of the tank.

A. Swimming 160 yards in four minutes and thirty seconds, using the Breast, Side, Back and either the Trudgen or Crawl Strokes, each for 40 yards. Approach a drowning person and swimming with him twenty yards to a place of safety. Demonstrating ability to properly apply methods of resuscitating a person apparently drowned.

Note:—All who cannot qualify as high as C Class are not allowed in pleasure boats or shells.

(BACK OF CARD)

23. Exercise Periods.—The following periods of exercise are the basis of instruction for midshipmen in the required subjects given in this manual:

Subject	4th Class.	3d Class.	2d Class.
1 Football	4*	2*	2*
2 Baseball	3	2	2
3 Crew	3	2	2
4 Track and Field	3	2	2
5 Basketball	3	1	1
6 Swimming	6*	3*	3*
7 Boxing	4*	2*	2*
8 Wrestling	4*	2*	2*
9 Lacrosse	3	1	1
10 Rifle	0	0	0
11 Fencing	6*	1*	1*
12 Gymnasium	2*	1	1
13 Water polo	3	1	1
14 Tennis	1	1	1
15 Soccer	3	1	1
16 Hand Ball	1	1	1
17 Golf	0	0	0
Posture	1	1	1
Training	3	1	1
Practical gymnasium	2*	1*	1*
Setting up exercises	2	1	1
Companion exercises	1	1	1
Rough and tumble	1*	1*	1*
Leadership	1*	1*	1*
	60	30	30

Setting up exercises are given to all midshipmen for 15 minutes at the beginning of each drill period.

Subjects marked with * should receive extra periods given by any drill schedules.

Gymnasium periods for first classmen should be devoted to electives (coaching).

The fourth class periods include 4th class summer periods.

24. Marks in Military Character.—At the end of each Academic month marks in Military Character are assigned to all midshipmen coming under the observation of instructors in physical training.

REQUIREMENTS

FOOTBALL

TEST "C"

25. Rules.
26. Tackling.
27. Tackling, body in front of runner.
28. Importance of tackling.
29. Falling on the ball.
30. Falling on ball, rolling to feet.
31. Stiff arm.
32. Protecting the ball.
33. Running with ball.
34. Blocking with shoulder.
35. Body checking.
36. Forward pass: "The grip pass."
37. Flat pass.
38. Catching forward passes.
39. Long passes.
40. Catching punts.
41. Use of body in catching.
42. Practice kicking.
43. Kicking in the wind.
44. Punting.
45. Signal for ready.
46. Position for kick.
47. Low punting.

TEST "B"

48. Kick off.
49. Goal from touchdown.
50. Place kicking.
51. Drop kicking.

TEST "A"

52. Offense and defense.

BASEBALL

TEST "C"

93. Rules.
94. Diamond.
95. Pitching.
96. Batting.
97. Catching.
98. Base Running.
99. Infielders.
100. Outfielders.

TEST "B"

101. Condition.
102. Scoring.

TEST "A"

103. The base umpire.
104. Umpiring.
105. Coaching.

CREW

TEST "C"

108. Rules.
109. Position at oars.
110. Movements of stroke.
111. The recovery.

112. Analysis of stroke.
113. Faults.
114. Form.
115. "Feel" of the boat.

TEST "B"

116. Commands for manning and handling a shell.
117. Coxswain.
118. Nomenclature for eight-oared shell.
119. Nomenclature of oar.

TEST "A"

120. Officiating.

TRACK AND FIELD

TEST "C"

Sprint Running

135. The start.
136. On your mark.
137. Get set.
138. Go (pistol report).
139. The first ten yards.
140. Form in sprint running.
141. The finish.
142. Drawing for positions.

Distance Running

143. The start.
144. Form in distance running.
145. Judgment of pace.

Relay Races

146. Various types of races.
147. Passing the baton and keeping proper course.

High and Low Hurdles

148. Variety, height and distance.
149. Strides between hurdles.
150. Form.
151. Throwing the javelin.
152. Putting the shot.

TEST "B"

153. Running high jump.
154. Form for running high jump.
155. Running broad jump.
156. Form for running broad jump.

Pole Vault

157. Marks, take-off, etc.
158. Form.

Discus Throwing

159. Form.

TEST "A"

160. Terms used in track.
161. Officiating.
162. Games committee.
163. Referee.

164. Inspectors.
165. Scorer.
166. Clerk of course.
167. Marshal.
168. Surveyor.
169. Press steward.
170. Starter.
171. Judges of the finish.
172. Field judge or measurers.
173. Junior judges.
174. Time keepers.

BASKETBALL

TEST "C"

223. Catching the ball.
224. The under hand pass.
225. Push pass.
226. Hook pass.
227. Bounce pass.
228. Passing in general.
229. Goal throwing in general.
230. Long bank shots.
231. Push or loop shot.
232. Short bank shot.

TEST "B"

233. Stops.
234. Form for stop.
235. Turns.
236. Pivots.

TEST "A"

237. Training for officiating.
238. Natural qualities.
239. Knowledge of rules.
240. Drill as an official.
241. Rules of play.
242. Information to players.
243. Mental attitude.
244. Fouls.
245. Substitution.

SWIMMING

First Part—Practical Swimming

TEST "C"

248 to 250. Swimming or keeping above the water for 5 minutes. Demonstrating the Back, Breast and Side Strokes.

TEST "B"

248 to 250. Swimming 120 yards in 3 minutes and 30 seconds, using Back, Breast and Side Strokes, each for 40 yards. Diving into the water and raising an object from the bottom of the tank.

TEST "A"

248 to 253. Swimming 160 yards in 4 minutes and 30 seconds, using the Back, Breast, Side, and either the Trudgen or Crawl Strokes, each for 40 yards. Approaching a drowning person and swimming with him 20 yards to a place of safety. Demonstrating ability to properly apply methods of resuscitating a person apparently drowned.

254. Approaching a drowning person.

Breaks and Holds with Carries

255. Wrist hold.
256. Two hands on one.
257. Front neck hold.
258. Front neck hold, leg scissor around waist.
259. Back neck hold, single arm.
260. Back neck hold, double arm.
261. Back neck hold with scissor around waist.
262. Double arm hold.
263. Tired swimmer's carry.
264. Hair carry.
265. Head carry.
266. Cross chest carry.
267. Two point carry.

BOXING

TEST "C"

284. Clinching the fist.
285. On guard position.
286. Advance.
287. Retreat.
288. Left step.
289. Right step.
290. Left hand lead to face.
291. First counter for left hand lead to face.
292. Second counter for left hand lead to face.
293. Left hand lead to body.
294. First counter for left hand lead at the body.
295. Second counter for left hand lead at the body.
296. Right hand lead to face.
297. First counter for right hand lead at the face.
298. Second counter for right hand lead at the face.
299. Right hand lead to body.
300. First counter for right hand lead at the body.
301. Second counter for right hand lead at the body.
302. Slipping.
303. Slipping a left hand lead.
304. Slipping a right hand lead.
305. Shadow boxing.
306. Boxing.

TEST "B"

307. Straight left hand blow to face as a counter.
308. Straight left hand blow to body as a counter.
309. Straight right hand blow to face as a counter.
310. Straight right hand blow to body as a counter.
311. Infighting.
312. Left hand hook to the body while infighting.
313. Right hand hook to the body while infighting.
314. To avoid infighting.
315. Double leads.
316. Double counters.
317. Side-stepping.
318. Side-step number one.
319. Side-step number two.
320. Side-step number three.
321. Side-step number four.

322. Hooks.
323. Left hand hook to face as a counter.
324. Left hand hook to body as a counter.
325. Right hand hook to face as a counter.
326. Right hand hook to body as a counter.
327. One-two punch.
328. One-two punch. Number one.
329. One-two punch. Number two.
330. Shadow boxing.
331. Boxing.

TEST "A"

332. Uppercuts.
333. Left hand uppercut to chin.
334. First counter for left hand uppercut at the chin.
335. Second counter for a left hand uppercut at the chin.
336. Right hand uppercut to the chin.
337. First counter for right hand uppercut at the chin.
338. Second counter for right hand uppercut at the chin.
339. Right hand uppercut to the chin as a counter.
340. Four important cross-counters.
341. Cross-counter number one.
342. Cross-counter number two.
343. Cross-counter number three.
344. Cross-counter number four.
345. Left hand pin and right hand hook.
346. Right hand pin and left hand hook.
347. Shadow boxing.
347-A. Boxing.

WRESTLING

TEST "C"

348. Starting position.
349. Referee's hold.
350. First hold down.
351. Second hold down.
352. Defensive position, on the knees.
353. Offensive position, on the knees.
354. Tackle or double leg hold.
355. Guard for tackle or double leg hold.
356. Counter for tackle or double leg hold.
357. Arm and leg hold, from referee's hold.
358. Guard for arm and leg hold.
359. Counter for arm and leg hold.
360. Side chancery and arm hold from referee's hold.
361. Guard for side chancery and arm hold.
362. Counter for side chancery and arm hold.
363. Quarter-nelson.
364. Guard for quarter-nelson.
365. Counter for quarter-nelson.
366. Near half-nelson and further wrist hold.
367. Guard for near half-nelson and further wrist hold.
368. Counter for near half-nelson and further wrist hold.
369. Further half-nelson and scissor hold on near arm.

370. Guard for further half-nelson and scissor hold.
371. Counter for further half-nelson and scissor hold.

TEST "B"

372. Forward chancery and bar hold, on the feet.
373. Guard for forward chancery and bar hold, on the feet.
374. Counter for forward chancery and bar hold, on the feet.
375. Rear waist hold, from referee's hold.
376. Guard for rear waist hold.
377. Counter for rear waist hold.
378. Flying mare, from referee's hold.
379. Guard for flying mare.
380. Counter for flying mare.
381. Further arm hold, offensive position, on the knees.
382. Guard for further arm hold.
383. Counter for further arm hold.
384. Hammer lock and crotch hold, from offensive position on the knees.
385. Guard for hammer lock and crotch hold.
386. Counter for hammer lock and crotch hold.
387. Three-quarter-nelson, from offensive position, on the knees.
388. Guard for three-quarter-nelson.
389. Counter for three-quarter-nelson.

TEST "A"

390. Hip lock, from referee's hold.
391. Guard for hip lock.
392. Counter for hip lock.
393. Double arm lock and back heel.
394. Guard for double arm lock.
395. Counter for double arm lock.
396. Half-nelson and body hold, from referee's hold.
397. Guard for half-nelson and body hold.
398. Counter for half-nelson and body hold.
399. Bar hammer lock and further half-nelson, from offensive position, on the knees.
400. Guard for bar hammer lock and further half-nelson.
401. Counter for bar hammer lock and further half-nelson.
402. Double bar hold, from offensive position, on the knees.
403. Guard for double bar hold.
404. Counter for double bar hold.
405. Half-nelson from the front.
406. Guard for half-nelson from the front.
407. Counter for half-nelson from the front.

LACROSSE

TEST "C"

439. Handling lacrosse stick.
440. Passing the ball.
441. Picking up the ball.
442. The approach to the ball.

443. The short pass.
444. The long pass.
445. Checking a stick.
446. Check with feet.
447. Dodging.
448. Body checking.
449. Checking an opponent's stick.
450. The line-up.
451. Position for face-off.

TEST "B"

452. Attack play (offensive).
453. Passing the ball in play.
454. Position when uncovered.
455. Rule of attack.
456. Shooting goals.
457. The defense system.
458. Stopping an attack player.
459. Coaching from behind.
460. Stopping a dodger.
461. In home position.
462. Out home position.

TEST "A"

463. Officiating, field captains.
464. Referee.
465. Umpires.
466. Time keepers.

RIFLE

There are no requirements under this sport.

FENCING

Small Sword

TEST "C"

484. Sword exercise.
485. Position of guard.
486. Lines of quarte and sixte.
487. Advance and retire.

Simple Parries and Attacks

488. Quarte parry.
489. Sixte parry.
490-491. Low quarte.
492. Low sixte.
493. Quinte.
494. Seconde.
495. Prime.
496. Tierce.
497. The lunge.
498. Attack in line of quarte.
499. Attack in line of sixte.
500. Low quarte or sixte.
501. Quinte.
502. Tierce.
503. Seconde.
504. Prime.

Simple Parries and Returns

505. Sixte and quarte.
506. Low sixte and quarte.
507. Low quarte and sixte.

TEST "B"

The Engagements

508. Sword exercises, in line of quarte (sixte) assume your guard.
509. Sixte (quarte) engagements.
510. Straight thrust.
511. Cut over the point.
512. Disengage attack.

Parries for Disengage and Cut

513. Quarte, sixte, quinte, tierce, prime.
514. Compound attacks.
515. One! two! attack.
516. Double attack.
517. Parries for compound attacks.

TEST "A"

518. Sword exercise without the numbers.
519. Change engagements, quarte (sixte).
520. Disengage.
521. Parry, quarte, sixte, low quarte, low sixte, seconde, prime, quinte, tierce, counter for quarte (sixte).
522. Cut and disengage.
523. One! two! attack.
524. Double attack.
525. Parries for compound attacks.

SABRE

TEST "C"

526. Sword exercise.
527. Moulinet. From the position of sword exercise.
528. The guard.
529. The advance (retire), left (right) step.
530. To change guard.
531. The parries.
532. The attacks.
533. Simple attacks.
534. Simple parries.

TEST "B"

535. Movements to be executed without numbers.
536. Simple attacks and parries.
537. Simple attacks and return parries.
538. Simple parries and return attack.
539. Compound attacks and compound returns.
540. Compound attacks.
541. Compound parries.

TEST "A"

542. Compound attacks and parries.
543. Compound attacks and simple parries.
544. Single attacks and compound returns.

CANE EXERCISE

TEST "C"

545. Cane exercise.
546. Moulinets.
547. Left and right flank moulinets.
548. Left cheek moulinets.
549. Right cheek moulinets.
550. Left and right moulinet, forward (backward).
551. Left and right flank moulinet, forward (backward).
552. Left cheek moulinet, forward (backward).
553. Right cheek moulinet, forward (backward).
554. The head parry in tierce.
555. The head parry, hand in quarte.
556. The head parry with two hands.
557. Left or right cheek parry.
558. Left or right flank parry.
559. The guard (left and right moulinet guard).
560. Change position of guard to the right.
561. Head parry, hand in tierce.
562. Head parry, hand in quarte.

TEST "B"

563. Left and right moulinet guard.
564. The thrust.
565. The attacks.
566. Combination of parries and attacks.
567. Left and right moulinet.
568. To change guard to the front (rear).
569. To strike backhanded with left (right) hand.
570. Combination of parries and attacks.
571. To change position to left.
572. The side lunge.
573. The volte to the rear.
574. Leap to the front.

TEST "A"

575. Movements from the position of guard.
576. From the position of guard.
577. From the position of guard.
578. Additional exercises.

BAYONET FIGHTING

TEST "C"

579. Elementary exercises.
580. Signal guard.
581. Signal short guard.
582. Signal long thrust.
583. Signal short thrust.
584. Signal jab.
585. Signal parry.
586. Signal butt strokes.
587. Signal slash, following butt stroke.
588. Signal disengage.
589. Signal cut-over.

TEST "B"

590. Bayonet strokes.

TEST "A"

591. Combination exercises.

GYMNASTICS

TEST "C"

597. Formation of class.
598. Horizontal bar.
599. Parallel bars.
600. Side horse.

TEST "B"

601. Horizontal bar.
602. Parallel bars.
603. Side horse.
604. Rings.

TEST "A"

605. Gymnastics.
606. Equipment.
607. Officials.
608. Events contested.
609. Awards, etc.
610. Scoreboard for dual meets.

WATER POLO

TEST "C"

614. Court.
615. Goals.
616. Ball.
617. Team.
618. Time of game.
619. Marking of court.
620. Goals.
621. Choice of goals.

TEST "B"

622. Outlines of play.

TEST "A"

623. Officiating.
624. Penalties.

TENNIS

TEST "C"

642. Rules.
643. The game.
644. Scoring.
645. A set.
646. Service.
647. Return of service.
648. Returns other than service returns.
649. Ethics of tennis.

TEST "B"

650. Court position.
651. Court tactics.

Strokes

652. Service strokes.
653. Ground strokes.
654. Volleys.
655. Lobs.
656. Overhead returns.
657. Stroke execution.

TEST "A"

Fundamental Principles of Playing

658. The eye.
659. The racquet grip.
660. Footwork.
661. Mental attitude.

SOCCER

TEST "C"

664. Kicking the ball, standing position.
665. Kicking the ball, running position.
666. Volleying.
667. Dribbling.
668. Passing the ball.
669. Receiving a pass.
670. Receiving a pass on the run.
671. Heading.

TEST "B"

672. Players and positions.
673. Field of play.
674. Duration of game.
675. Change of goals.
676. Scoring.

TEST "A"

677. Officiating.

HAND BALL

689. Starting position.
690. Serve.
691. Receiving position.
692. Return of ball.
693. Singles.
694. Doubles.
695. The offensive.
696. The defensive.
697. The game.
698. Scoring.

TEST "B"

699. Stages of learning hand ball.
700. Form for striking ball.
701. Object in driving ball.

TEST "A"

702. Terms of the game.
703. Officiating.
704. Court.

GOLF

Not a requirement at this time.
Notes are given for general information.

TRAINING

TEST "C"

727. Basis of athletic training.
728. Physical development.

729. Grading of exercise.
730. Exhaustion.
731. Extreme exhaustion.
732. Normal fatigue.
733. Practical hygiene.
734. Reducing weight.

TEST "B"

735. Diet.
736. Composition of foods.
737. Proportion of foods.
738. Overweight.
739. Narcotics.
740. Liquids.

TEST "A"

741. Injuries.
742. Muscle bruise.
743. After care of muscle bruise.
744. Rubbing muscle bruises.
745. Protection of joints.
746. For indoor sports.
747. Joints.

ROUGH AND TUMBLE

TEST "C"

759. Leading a prisoner by finger pressure.
760. Leading a prisoner by one hand.
761. Coming up from the ground, kick to head, and counter knee break or knee twist.
762. Waist hold from rear and counter toe hold.
763. Back strangle and counter elbow break.
764. Arms pinioned to side from rear and counter elbow break.
765. Arms pinioned from the rear and counter right elbow, blow to stomach.
766. Front waist hold and counter neck twist.
767. Front strangle and counter wrist bend or arm twist.

TEST "B"

768. Crotch kick and counter.
769. Holding a prisoner in front of you.
770. Right hand blow to face and counter shoulder twist.
771. Striking opponent with side of hand.
772. Right hand blow to face and counter elbow and shoulder twist.
773. Chest push and counter wrist bend.

TEST "A"

774. Attacked by person with knife and counter elbow break and knee to crotch.
775. Attacked by person with knife, counter elbow and shoulder twist.
776. Disarming a gun man.
777. Disarming a gun man from the rear.

LEADERSHIP

TEST "C"

Commands

778. Voice of command.
779. Preparatory.
780. Interval.
781. Execution.
782. Acquiring a chest voice.
783. Response to command.
784. Qualities of sound.
785. Vowel sounds.
786. Tension.
787. Improvement through exercise.
788. Mass commands.

TEST "B"

Individual Qualities

789. Qualities.
790. Importance of posture.
791. Self-reliance.
792. Poise.
793. Initiative.
794. Judgment.
795. Enthusiasm.
796. Discipline.

TEST "A"

Leadership of a Team

797. Fundamentals.
798. Dissension.
799. Cliques.

PRACTICAL GYMNASIUM TESTS

		C.	B.	A.	Remarks:
800.	1. Bar Vault.	Height of shoulders for all classes.			Double take off, without a run.
801.	2. Standing Broad Jump.	7′ 3″	6′ 6″	8′	Measured from toe to heel.
802.	3. Running High Jump.	3′ 10″	4′	4′ 2″	Single or double take off.
803.	4. Dips on Parallel Bars	3 times	5 times	6 times	Without a swing.
804.	5. Chins on Hor. Bars.	5 times	8 times	10 times	Using any grip.
805.	6. Rope Climbing.	Up short without use of legs	Up and down short rope.	Up long rope without use of legs	Climb hand-over-hand.
806.	7. Make fast on single rope.	For all classes			
807.	8. Short Horse.	Short run stride, vault, horse at highest point.	Stride vault, take off from floor	Without run, take off from floor	Double take off. (In "C" test, take off is from mat.)
808.	9. Throwing Med. ball (4 lb.)	34 ft. 29 ft.	36 ft. 31 ft.	38 ft. 33 ft.	Right hand. Left hand.
809.	10. Shelf.	Mount without assistance, using any method			
810.	11. Running 440 yards.	70 sec. 68 sec.	68 sec. 66 sec.	66 sec. 64 sec.	Indoor. Outdoor.
811.	12. Hor. bar.	Reach height	Stretch height	Hanging	Backward circle.

PRACTICAL GYMNASIUM TESTS (Continued)

812.	13. Wall bars.	Alt. leg raise	Leg raise	Legs raise and parting	Hanging, hands on top round.
813.	14. Tumbling.	Two forward rolls.	Two backward rolls.	Two cartwheels	

POSTURE

TEST "C"

820. Position of attention.

TEST "B"

821. Posture for stride.

TEST "A"

820-821. Demonstration of C and B.

COMPANION EXERCISES

TEST "C"

824. Formation of the class.

825. Horizontal stoop falling (ankle support): arm bending and stretching.

826. Point stoop falling (ankle support): arm bending and stretching.

827. Rest, stride st. (upper arm support): trunk falling backward.

828. Horizontal side falling (ankle support): lower leg raising.

829. Wing lying (neck support) . . . body raising.

830. Horizontal stoop falling (ankle support): arm walk forward.

TEST "B"

Ability to demonstrate Test "C."

TEST "A"

Ability to lead a class in test "C."

SETTING-UP EXERCISES

TEST "C"

Perform setting-up exercises to the satisfaction of the drill instructors.

TEST "B"

Perform setting-up exercises to the satisfaction of the drill instructors.

TEST "A"

Be able to perform, give correct commands, point out the common faults and drill a squad in the exercises from paragraphs 833 to 1124.

DANCING

TESTS "C", "B", AND "A"

As organized by Dancing Instructors.

FOOTBALL

FOOTBALL

BY J. N. WILSON

Football Instructor, U. S. Naval Academy. Notes on kicking by Ensign Lyman S. Perry, U. S. Navy, All-American Guard, 1918

TEST "C"

25. Rules.—To satisfaction of instructor.

26. Tackling.—Head behind: Go in hard with crouching position, driving shoulder just above the knee, with head back of opponent's legs and both arms circling his legs. If tackling with right shoulder take off on right leg. When making a tackle "bow-on" keep your feet and drive shoulder half way between knees and hips. The momentum of the opponent will raise him in the air.

FIG. 1. Tackling, Head Behind

FIG. 2. Head Behind on Tackle

27. Tackling, Body in Front of Runner.—In this method of tackling the take off is made on the foot opposite the striking shoulder. Strike the opponent's leg just above the knee. Grasp legs with both arms tightly. The shoulder should strike the opponent's leg, slide off leaving the leg struck by the shoulder in the hollow of the striking shoulder's arm.

FIG. 3. Cross Body Tackle

28. Importance of Tackling.—It is absolutely essential for a football player to know how to tackle well. No player will ever be entirely successful until he has mastered tackling.

FIG. 4. Start of Head on Tackle

FIG. 5. Finish of Tackle

29. Falling on the Ball.—First Method: In falling on the ball throw your back between the opponent and the ball. When near a loose ball crouch low, arms extended toward ball, and lunge with good leg drive, skimming close to the ground, drawing the ball into the pit of the stomach, body curled around it, upper leg drawn slightly over the ball, both arms clasping it, head close to the ground. Players must learn from experience and judgment when to fall on the ball and when to pick it up. The chief thing to remember is not to try to do both. Fall on it when there is an

opponent near and pick it up for a run whenever possible without taking chances. The chief idea to keep in mind is to carry out a decision made. If you have decided to pick the ball up *do it*. If you decide to fall on the ball, *do it*. Do not try to do both. In case of doubt fall on it. Do not be undecided. Many coaches do not allow a player to pick a ball up at any time. The reason for this is because the player's natural tendency is to pick it up and if he has a chance for doubt he neither falls on the ball or picks it up, resulting in a resolute opponent knocking him aside and securing possession. Do not jump in the air and come down around the

FIG. 6. Falling on Ball

FIG. 7. Falling on Ball, Showing Dive

ball. Shoot straight at the ball. Often a player will shoot under an opponent who should be able to secure the ball due to the opponent's system of jumping into the air and coming down around the ball.

30. Falling on Ball, Rolling to Feet.—The rolling method is not generally used as it is not quite so sure and increases chances of injury. The body is thrown around the ball and at right angles to the line of direction in which the player is running. The ball is drawn into the stomach with both hands and slipped under the upper arm as the roll is completed, using the lower arm and lower knee to get on feet.

31. Stiff Arm.—A man coming in for a high tackle is shoved off with a stiff arm; the heel of the hand being forced against the tackler's head or shoulders. In using a stiff arm the opponent generally lowers his head to get under the stiff arm. Often it is a good place to stiff arm the opponent on top of the head and jump sideways. The impetus of the tackler will often give the runner assistance in the sideway jump. Often when going through the line and both hands are busy holding the ball the shoulder

can be used to bump off an opponent by simply driving the shoulder into the tackler's neck or his shoulder and throwing your own feet away from the tackler. This mixed with a turn often makes a line bucking back famous. Few backs who use this trick realize when they do it. They simply have a desire to tear loose and the methods used are often subconscious or reflex action.

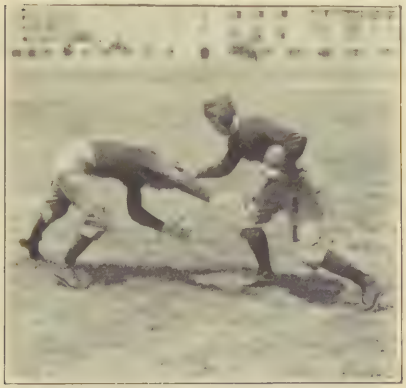


FIG. 8. Protecting the Ball Showing Use of Stiff Arm

32. Protecting the Ball.—When carrying the ball, it should be shifted from one arm to the other as direction of running is changed, this permits arm nearest the tackler being free for stiff arm. When tackled while going through the line keep both hands on the ball. When carrying the ball in one arm carry it so that an opponent cannot knock it out of your arm from any angle.

Note: Observe the hand on one end and the other end anchored between the upper arm, forearm and body.

33. Running with Ball.—Run with knees high, trunk bent low and weight well to the front, head up and eyes looking for a possible opening. When passing an opponent pass close to him. Often it is a good plan to reverse your field and take a slap on the leg as you out-general the tackler. A runner should dodge but should do it while going ahead. *Never* go to the

FIG. 9. Putting Ball Under Arm

FIG. 10. Hitting the Line

rear. Never stop still or dodge in a line parallel to the goal but gain ground all the time. A dodger is all right if he is gaining ground all the time and keeps his speed. A dodge is not good football if ground is lost or too much momentum lost. A runner who can "Jim Thorpe" his way down the field generally has poor opposition.

34. Blocking with the Shoulder.—The shoulder block is made by driving the shoulder under the opponent's arms, into his side or stomach with a full leg drive. When you get a man "going" with this block, stick to him —*take short steps*. You have him at your mercy.

35. Body Checking.—Throw the body across the path of the opponent using your hip or side, catching the opponent just above his knees. When blocking with right side take off with left foot. When blocking with left side, take off with right foot. There are many forms of blocking, varying from a straight head block (by simple process of butting) to indianizing which is often done in an illegitimate way by driving the heel into the opponent. Indianizing is not recommended since unnecessary roughness often creeps in when using this method.

FIG. 11. Shoulder Blocking

36. Forward Pass: "The Grip Pass."—This pass is by far the most accurate method of passing the ball. Place three fingers across the laces, the forefinger to the rear of laces, thumb extended around the ball. Bring the ball back to the ear and drive forward above the shoulder, using arm and shoulder motion as in baseball. Care must be exercised to have the axis of ball in direction of passing. Just as the ball is about to leave the hand, cut the hand across the face, giving it the desired spiral movement.

FIG. 12. Body Checking

FIG. 13. Forward Pass. The Grip Pass

37. Flat Pass.—(Balanced Pass) Used when ball is wet. Place ball on palm of hand, palm up, laces across fingers. Bring ball back for a long arm swing, care being taken to keep the axis pointed in the direction the ball is to be passed. Carry the arm forward above the shoulder letting the ball roll off the fingers at the end of the throw, giving it the necessary spiral movement. Both kinds of passes should be used daily. In both passes keep the wrist firm while passing. The ball is often wabbled by a snap of the wrist just as it leaves the hand.

FIG. 14. Flat Pass

FIG. 15. Catching Forward Pass

38. Catching Forward Passes.—In catching a pass bring the ball against the body whenever possible. In many cases, however, the hands alone must be depended upon. There are many methods of catching the ball and the individual will determine the best method for his own case and go to it.

39. Long Passes.—These passes are always running passes and are usually caught over the shoulder, making a pocket of the arms and body. Both the passer and the receiver must be schooled in each other's work. In general it is necessary for the passer to make the pass to a spot that is vacant. It is necessary for the catcher to break away and catch the pass on the run. Dummy practice is the best method of practicing passes. If the passer and the catcher have perfect team work, they can beat a perfect defense. The offense has the advantage.

40. Catching Punts.—The most important thing about catching punts is to judge the ball. A spiral kick which is now used, has two distinct ways of traveling. When the ball starts on its downward course the forward point is either down or up. If it is down the ball has less air resistance and will carry farther. If it is up the air resistance is greatest and will cut back toward the kicker. The man catching punts must keep his eye glued on the ball watching the point and get a quick start to get under it.

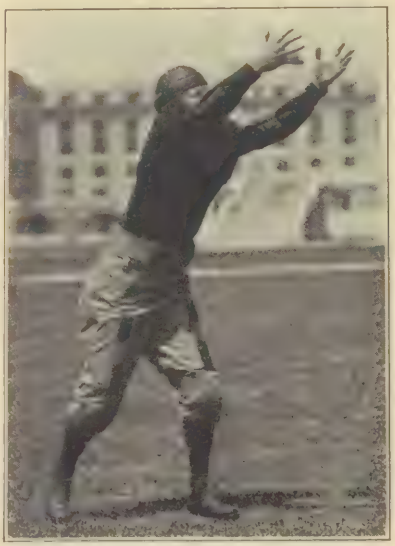


FIG. 16. Catching a Punt

Keep the body square in front of the ball when possible, extending the arms upward to meet the ball and judge it so that it will strike the body at the lower part of chest, bringing the arms down as the ball descends, pinning it against the body with the hands the instant it comes in contact.

41. Use of Body in Catching.—The body should be used as a background whenever possible, never catch the ball with the hands alone unless the ball has to be caught very close to the ground or over the head. When catching punts have your mind concentrated on catching the ball and worry about getting away after you have it. Learn to place it under the arm quickly, get away fast, and have a stiff arm ready.

42. Practice Kicking.—All instructions are for a right-footed kicker. They would be exactly the reverse for a left-footed kicker. To be a good kicker in any of the different forms of kicking, continual practice is absolutely necessary. The kicker should have as much practice under normal conditions—actual scrimmage—as he does when practicing alone, as this is the only way in which he will be able to time his kicks. This also accustoms him to see men rushing toward him, and will train him to pay attention to kicking only.

43. Kicking in the Wind.—In a high wind, or in any wind of moderate strength, the kicks should be high when kicking with the wind, and low when kicking against the wind. Allowances must be made for wind blowing across the field. The best way to determine the direction of the wind is to pull up a small handful of grass and toss it into the air.

FIG. 17. Dropping Ball for Punt

44. Punting.—The kicker should stand directly behind the center, at a distance from the center which must be regulated by his speed in getting off his kicks, usually from eight to ten yards. Both feet should be on a line parallel to the scrimmage line, and both feet together.

45. Signal for Ready.—Before signalling to the center for the ball to be passed, the kicker should look at every man on his team and see that they are in proper position. The arms should then be raised toward the center with the hands and fingers in the position in which the ball is to be received. The center then knows that the whole team and the kicker are ready for the ball to be passed. The center then passes the ball when he is ready—as soon after the kicker has his arms in position as possible.

46. Position for Kick.—As the ball comes back to the kicker, he should step back with his left foot (for right-footed kicker) so that at the instant the ball is received he is ready to start forward. The ball should be held with one hand on each side, slightly to the rear of the middle of the ball. The arms should be held slightly bent at the elbows with the forearms parallel with the ground. The right foot should be raised just clear of the ground and replaced as near its original position as possible. Drive

forward with the left leg and then with the right, placing the left foot firmly after the last step (the second step). As much speed as possible should be attained in the two forward steps as this speed drives the ball forward. The hands should then be parted, allowing the ball to drop in the same position as it was held between the hands, seam upright and its long axis parallel to the ground. The right leg should swing from the hip in a straight line forward, bent only slightly from the knee. At the end of the swing the leg should tend slightly to the left, to impart the spiral motion to the ball. The foot should strike the ball when it is about three feet from the ground. After meeting the ball the right leg should "follow the ball through" that is, swing as high as possible. The body should be bent backward from the hips in order to get the weight of the entire body into the kick, as the leg is swung forward.

47. Low Punting.—If the ball is kicked when it is near the ground, it will cause the ball to travel close to the ground and still keep its distance. This method is used when punting against a high wind. The kicker should keep his eye on the ball until after he has kicked it. No attention whatever should be paid to the men coming through the line except in case they have been rushing the kicker, and then the kicker should make a special effort to get off his kicks as soon as possible.

TEST "B"

48. Kick Off.—When kicking off, a tee 4 or 5 inches high should be built up of soft earth, concave at the top to fit the ball. The lacing should be placed on the tee, and the ball tipped at an angle of 45° or at any angle that will obtain the best results from the individual kicking. The kicker should pace off several paces so that at his last stride his left foot will be placed on a line with, and about 4 or 5 inches to the left of the ball. As much speed as possible is usually advisable, as this is almost always necessary to drive the ball high and far. The kicker's foot should meet the ball at its lower point. To do this the kicker must always keep his eye on the lower end of the ball, while running toward it. He should pick out that

FIG. 18. Kicking Off

part of the field he is to kick to, and let his team know this part. He should study his kicks and if they are going too high and do not carry enough, he should, on his last stride, place his foot a little to the rear of the ball. This will make the ball carry further and cut off a little height. The kicker or some other man so designated should act as "cover man" for the kicks. If ball is placed vertically on end or changed from the regular position, defense should look out for a short kick.

FIG. 19. Kick After Touchdown

49. Goal from Touchdown.—The man holding the ball should lie down on his left side facing the goal and pick out a certain spot where he is to place the ball, not less than twelve yards from the goal, for any distance less than that requires too much altitude in order to cross the goal. The ball should be held between the index and second fingers of the left hand, with the thumb along the inside edge of the ball. The index finger of the right hand should be placed on the top of the ball, with the thumb and second finger to turn the ball as necessary. The lacing should be toward the goal. The kicker should stand two paces from the ball. He must direct the holder which way to turn or to tip the ball, such as "Seam in, Seam out, Top in, Top out." When ready to kick he should say, "Down." The holder then tips his left bottom hand so that the two fingers are withdrawn from the bottom of the ball. The thumb holds the ball in its original position. The kicker should stand with his right foot on a line with the ball and the goal. He then takes his two strides, placing his left foot even with, and about 4 or 5 inches to the left of the ball, on his last stride. His left foot should be planted firmly. He must always keep his eye on the ball until he has kicked it, the foot meeting the ball near its lower end. The index finger of the right hand of the holder should be withdrawn the instant the kicker's foot meets the ball. No greater force than is necessary for the ball to safely clear the goal should be used.

50. Place Kicking.—The player who is to level the ball should pick out a certain level spot and mark it so that the kicker may know where the ball is to be placed. The man holding the ball should kneel to the right of the spot and facing it. After seeing that his team's defense is stationed properly and that the kicker is ready, he should raise his

arms in front of him ready to receive the ball from the center, his right hand above left. The kicker should note the marks where the ball is to be placed, and, placing his left foot even with the spot and about six inches to the left of it make one big pace backwards in line with the goal and the spot selected. His right foot should be placed on this mark and his left foot should be a short pace back of his right. In this position he is ready to start forward as the ball is being put in position. As soon as the ball is received by the man placing the ball, it should be placed as soon as possible with the laces toward the goal, and held by the right hand only, and with the index finger drawing his left arm clear. The ball should be tipped in any direction that the kicker finds necessary when placed on the ground. As much speed as possible in placing the ball accurately is necessary for a successful place-kick. The kicker only takes one stride and yet gets the power of two strides before he kicks the ball. The kicker should keep his eye on the ball until his foot meets the ball, and not on the goal. If greater distance is required, the left foot should be placed four or five inches to the rear of the ball. This will cut down the altitude of the ball.

FIG. 20. Kick from Behind Line of Scrimmage

51. Drop Kicking.—The kicker should stand from eight to ten yards from the line of scrimmage, faced toward the goal, and back of the center. His feet should be together and as the ball is passed to him he should step back with his left foot. In signalling for the ball, he should see that his team is all ready and that the defense is in position. He then raises his arms forward with fingers of his hands extended. The center then passes the ball when he is ready. After receiving the ball the kicker should

FIG. 21. Finish of Drop Kick

start forward immediately, driving forward with his left foot and then with his right. The ball should be held squarely between the hands, one hand on each side. The ball should be held at the angle desired for it to strike the ground, usually about 45 degrees. It should be dropped at the beginning of the second step. The instep should strike the ball as it touches the ground, and full leg swing should follow the ball through. Some players can use the toe to better advantage, and this gives greater distance, but the instep will drive the ball forty yards and will give greater accuracy. Great care must be taken to swing the leg straight forward, as this is the only way that the ball can be kicked accurately. As much practice as possible should be given to drop kicking as it is only sure when perfected by constant practice.

TEST "A"

52. Offense and Defense. Formations and plays covered in detail on black board and field to satisfaction of instructor. Review of fundamentals under C and B.

FIG. 22. Defensive Position of Right Tackle

FIG. 23. Starting Position

COACHING FOOTBALL

53. System to be Used.—The first important thing in coaching football is to decide on a definite system and work it up gradually. If two or more formations are to be used try to arrange so that the same signals will be good throughout similar holes in both formations. Also as far as possible allow all players to take the same opponents.

FIG. 24. Position of Center

FIG. 25. Mud and Dry Cleats

54. Fundamentals.—Work hard with the men individually on fundamentals such as tackling, falling on ball, handling ball, carrying it properly, throwing and catching, passes, body checking, etc., so that the men are thoroughly familiar with each and then begin to mould them into a team.

55. Study Individuals.—Study your men as individuals as all men cannot be handled alike. Some must be driven and others encouraged. Develop confidence in your men and make them understand that a man, no matter how good a player he is, is only good when he is doing his best. A team is only good when it has eleven men working as a unit on every play. At first work for accuracy and then speed them up.

56. Develop Team Spirit.—Be strict and just. Do not let your star have privileges his team mates cannot have. You would be better off without him than to have him demoralize the team spirit. If any trouble arises in the team and they are not pulling together, find the trouble at once, as cliques and grudges will beat any team.

57. Outline of Work.—Have your work for the afternoon outlined, so that every man is kept busy, and insist on your men reporting on the field at the time set.

58. Second Teams.—Watch your second and third string men, letting them know that they are a big factor. A good second team makes a good varsity, and the seconds come in pretty handy in case of injury or graduation of varsity men.

59. Snappy Practice.—Football practice is hard work so make the practice snappy and interesting in every way possible. Teach your men to have confidence, but never under-estimate the ability of opponents. Have your men gradually worked to the point of being keyed to their highest

pitch for their big games. A mediocre team properly keyed is hard to beat while a good team not keyed, but over-confident, is often badly beaten.

60. Team Confidence.—A winning team must have confidence which is gained by being well drilled in fundamentals. Determination plays a very important part and can be instilled by the coach.

61. Offense.—In building up an offense start with the simplest plays and a simple but good set of signals. Many teams are handicapped with complicated signals. The plays should as nearly as possible look alike at the beginning but end up entirely differently. Arrange them with as much deception as possible to keep the opponent guessing. Harvard uses the system of "hidden ball" to best purpose.

62. Desirable Plays.—A few plays properly executed will bring much better results than many plays poorly executed. Most any play will work against a poor team but to beat a good team your team play or execution must be developed to the extent of every man doing what he is supposed to do on every play.

63. Defense.—The defensive work of a team usually decides its strength. A team that charges low and hard using their hands combined with sure tackling is hard to beat.

Defense should be worked out in detail early in the season, and offense later. A team that will not be scored on, can not be beaten.

64. Spring Practice.—

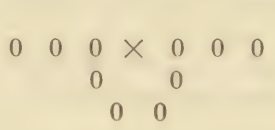
Ground drills.
Starts and sprints for backs.
Charging of linemen.
Carrying ball.
Kicking and catching punts.
Passing and catching.

65. Opening of Fall Practice.—

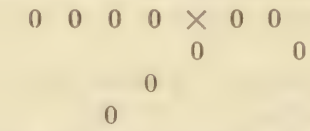
Kicking and catching punts, developing good form.
*Forward passing and catching.
Falling on ball.
Tackling dummy and tackling each other.
Blocking, shoulder and body.
Carrying ball.
Sled charging.
Running down under punts.
*Formations, signals and plays.

Note: Especially important where indicated by star.

66. Regular or Balanced Formation.—Any formation having an equal number of linemen on each side of offensive center is known as regular or balanced formation.



67. Unbalanced Formations.—Any formation that has one or more men shifted to one side of the offensive center making one side stronger than the other is known as an unbalanced formation.



68. System of Signals.—The A-Squad system cannot be given in this Manual. B-Squad uses a system of signals as used by most colleges in the country.

69. Numbering of Players.—Practically all teams number their players.

70. End Plays.—End plays are most successful against a team that does not charge in but stands and waits for the play to come to them. The success of any end play depends upon the interference taking care of the defense tackle, ends and backs, turning them in and cutting them down.

71. Plays Through Tackle.—Plays inside and outside tackle are undoubtedly the best plays in football.

72. Plays Through Guard.—Plays through guard are very often mass plays with heavy interference and sometimes simply quick openings with no interference which is good for a couple of yards.

73. Plays Through Center.—Center plays have changed considerably since the roving defensive center was adopted by many teams. Mass plays through center with the defensive center out work well when guards are swept out of the way.

74. Different Formations.—
Balanced, Unbalanced, Box, Spread and Half Spread, Kick.

75. Advantage of Kick Formation.—Kick formation offers the greatest opportunity of all. The offense has the kicker "pass or run threat" all the time and the defense must necessarily be open.

76. Qualities of Good Players.—*Ends:* These men must be heady, fast, sure tacklers and especially good at catching, falling on and handling the ball. They must have plenty of nerve and be able to take punishment.

Tackles: Must be aggressive using the arms to keep the opponent from getting to his legs or body. He must go forward fighting his way to the ball or cutting down the interference. He must be shifty and a sure hard tackler.

Guards: Must develop powerful leg drive charging low and hard with head up, eyes on the ball, going under the play when interference prevents getting the man with the ball.

Center: Must be a heady player, an accurate passer, quick low charger and hard sure tackler.

Backs: Must be strong runners carrying knees high and weight well forward, sure tacklers and know how to take a tackle and fall.

Quarterback: Must be a student of the game keeping absolutely cool, showing confidence in every play called.

77. Split Plays.—Split plays are very deceptive and work to advantage when properly timed.

78. Criss-Cross Plays.—One of the oldest plays in football that works against a team having a tackle and end trying to play the whole game when on defense.

79. Double Passes.—Double passes are used in various ways ending up in most any kind of play, line buck, criss-cross forward pass and sometimes a kick. The defense line must be shifty. It has a certain amount of ground to cover and in general it equalizes this distance.

80. Scouting.—The scout should get a high seat taking down on paper every formation used and as many plays as possible, especially passes, who passed it and where caught. Get as much of the following data as possible:

Do the ends smash in or wait?
Do they play the ball or take interference?
How far out do they play from the tackle on defense?
Which is the weaker one of two?
Which is best tackler?
Do they stand high on defense?
Do they charge through or wait on line of scrimmage?
Are the guards strong and heavy?
Do guards play high?
Does center play in line or as a roving center in defense?
What does center do against passes?

How far back do the halves play?
What style of defense do they use against passes, zone or man for man?
Position of fullback and quarterback?
Who does the passing?
Whom does he favor in throwing them?
Does kicker get height and distance, spiral or end over end?
Can he kick, pass and run?
How many passes tried?
Number completed and positions when tried?

81. Brief Pointers for Team.—

Line up quickly.
Be shifty and aggressive.
Keep near the ground, that's where your power lies, keep tail down and head up.
Never be charged back in line—go slow and make yourself as big as possible, use hands follow the ball.
Eleven men follow the ball at all times.
Don't stop for the horn, go until the ball is down.
Don't tackle out of bounds.
Don't loaf on the field of practice at any time.
Use your brains—they are your greatest asset.
Tackle straight on and carry your men back.
When you leave your feet, you are out of the game.
Interference and blocking come next in importance to defense.
Stick to your man in interference and blocking.
Hold the ball.
Hold your feet when running through the line.
Run through tackler after straight arm fails.
Look to both side-lines after each line-up for side-line play.
Don't talk, except to encourage your own men.
Leave arrangements to captain.
Put everything you have into the first play, and the first five minutes, then your pace is set, keep it up.
It's a disgrace to miss signals.

FOOTBALL AS A SPORT

82. Early History.—There is abundant evidence to prove that football is the oldest outdoor game in existence. An unknown form of a game with a ball existed as far back as 750 years before the Christian era. Another step closer brings the game of "harpaston" into view, which was very similar to modern Rugby football. This was a favorite game at Sparta. In this game the ball was driven by passing, kicking, or carrying to opposite goal-line. The advance was checked by blocking, holding, and tackling. The game was a continuous scrimmage without order or method. From the Greeks the Romans adopted the Greek game. At this time, however, the Romans had a football game of their own known as "Follis." In the year 28 B. C. Augustus, who followed Caesar, brought about a revision of the football rules of the day, grieved on account of their gentleness. The game as revised was played continuously down into the Middle Ages, and was again revived in Italy in 1898. In the meantime there were of course various forms of football throughout the world. Modern football dates from about 1863 when a code of rules was first formed for Association Football. This code was not acceptable to the Rugbeians who in 1871 formed the Rugby Football Union. Since that date the two games have been kept separate, and a third game known as "Football" has been evolved by American colleges.

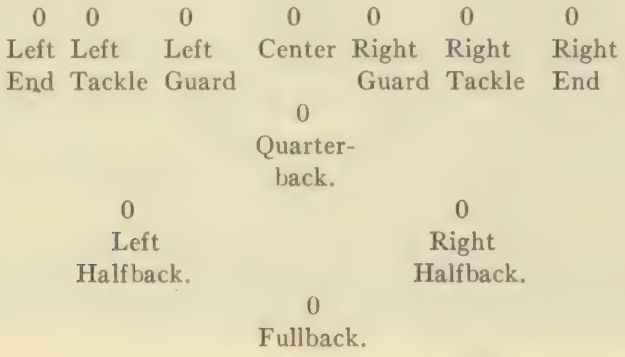
Football in America: As early as 1800 football existed in the older American colleges as an intra-mural sport. The first record of an intercollegiate game is between Princeton 4, Rutgers 6, at New Brunswick, Nov. 6, 1869. In 1870 Columbia joined in the intercollegiate games, and in 1871 Princeton formed the "Princeton Football Association" which is the pioneer organization of its kind in the intercollegiate world. By 1881 football had become a well-established college game, and in this year the first Western invasion took place when the University of Michigan played Harvard, Princeton, and Yale. In this year the professional trainer made his first appearance. Owing to numerous injuries football received a severe setback in the year 1894. In the military and naval academy the intercollegiate game was eliminated by each academy being restricted to its own grounds. This rule was set aside in 1899 and Army-Navy games again taken up. In 1906 President Roosevelt was instrumental in having the American Intercollegiate Football Rules Committee organized, which organization modernized the rules and introduced the forward pass which brought about an open form of the game.

83. Government of Football.—Football is today the greatest college sport. It is a true college sport and strictly an amateur game. Attempts

to give it a professional status have on the whole been unsuccessful, owing perhaps to the better quality of the college game. The only rules used in football are those drawn up under the Football Rules Committee. Officials are appointed under the Central Board on Football Officials of the National Collegiate Athletic Association.

84. The Varsity Team.—It need not be said that the team is composed of eleven men, except to distinguish from the varsity squad which usually includes about 80 men.

85. Official Titles.—The official titles to be used for positions of all Naval Academy teams are as follows:



86. Designation of Squads: A-Squad.—All players definitely assigned to the Varsity team or squad shall be known as members of the A-Squad, and will be so designated on training table lists, excused lists, etc.

87. B-Squad (Hustlers).—This is an auxiliary squad to the A-squad and is usually composed of four teams, and carries about 60 men. The purpose of the B-Squad is to develop material for the A-Squad, develop plays for use against the A-Squad, and to give the A-Squad scrimmage and practice from time to time.

88. Class Teams.—Football has the largest number of midshipmen of all the sports throughout the season. Classes always organize teams which near the end of the season develop considerable strength, and also material for the larger squads. The fourth class team usually arranges several games with outside institutions for the season.

89. Football Ship.—Usually when details are made up for the ships taking part in the Midshipmen's Summer Cruise the football team is assigned in a group to one ship. This list is made up during April, from the members of the squad who developed the necessary qualities in the last season. The squad generally gets leave about ten days early and reports to the Academy about September 20.

90. Naval Academy's Chief Rival.—West Point will always be the objective of the Navy team. The winning of this game against the Army marks the big success of the year. The record of games played to date of publication is as follows:

Year	Army	Navy
1890	0	24
1891	32	16
1892	4	12
1893	4	6
1894	No game.	
1895	No game.	
1896	No game.	
1897	No game.	
1898	No game.	
1899	17	5
1900	7	11
1901	11	5
1902	22	8
1903	40	5
1904	11	0
1905	6	6
1906	0	10
1907	0	6
1908	6	4
1909	No game.	
1910	0	3
1911	0	3
1912	0	6
1913	22	9
1914	20	0
1915	14	0
1916	15	7
1917	No game.	
1918	No game.	
1919	0	6
1920	0	7
1921	0	7
1922		
1923		
1924		

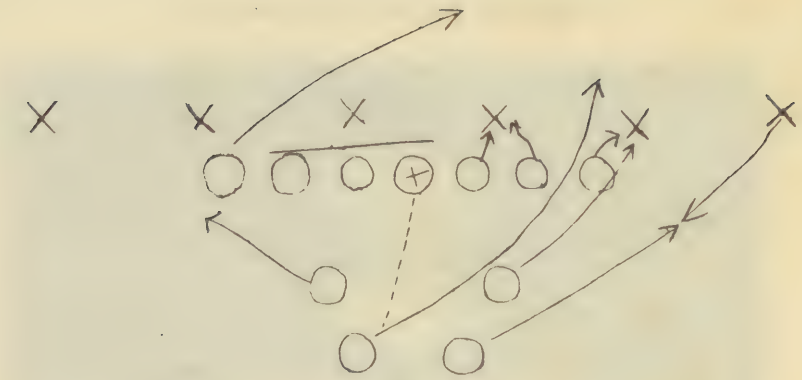
FIG. 26. The 11 Balls for Navy Victories

91. Schedules of Games.—The Navy team plays a schedule usually on the following order:

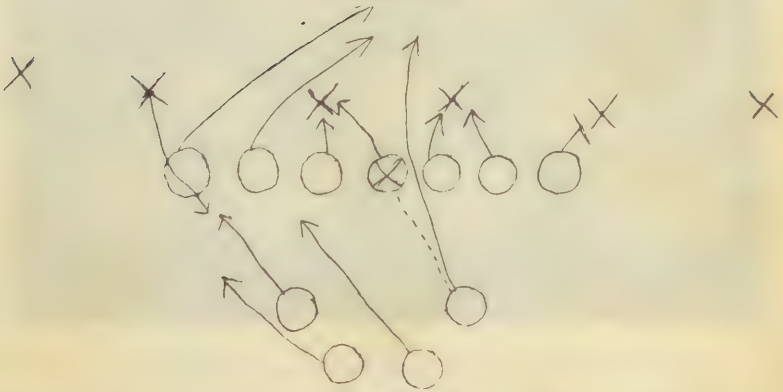
Opening game	North Carolina State or Univ. of So. Carolina.
Second game	Bucknell or West Va. Wesleyan
Third game	Georgetown or Johns Hopkins.
Fourth game	Princeton.
Fifth game	Penn-State, or Univ. of Pa.
Sixth game	(Weak team or no game)
Final game	WEST POINT (First Saturday after Thanksgiving).

92. Football Books.—At this time the following publications are the most important books on this sport.

FOOTBALL FOR PLAYERS & COACHES	Glenn S. Warner
WINNING FOOTBALL	Roper
THE LINE MAN'S BIBLE	Major Ernest Graves, U. S. A. (Ret.)



Play No. 1



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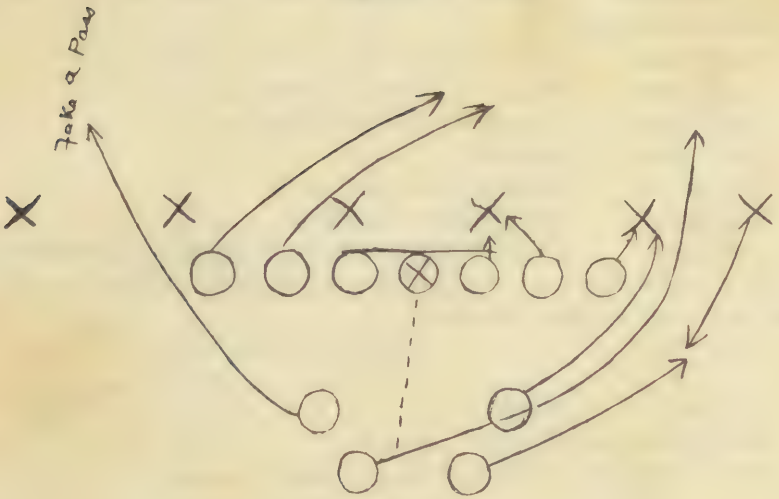

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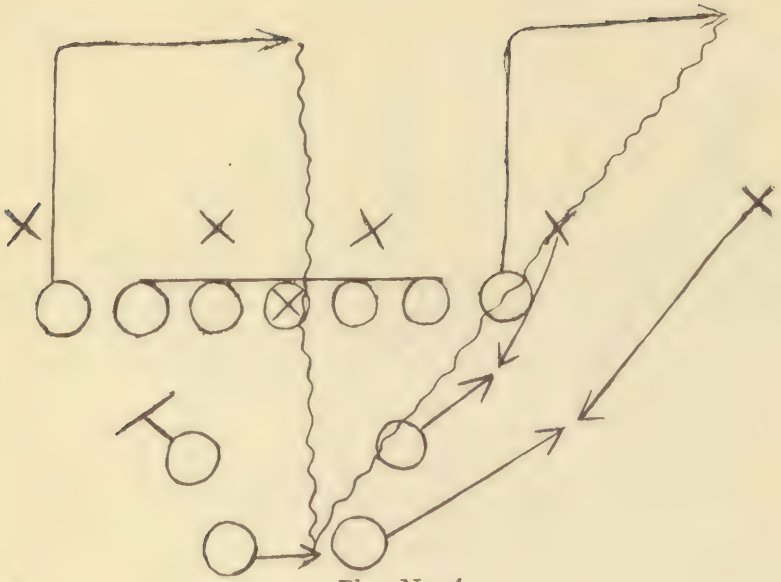

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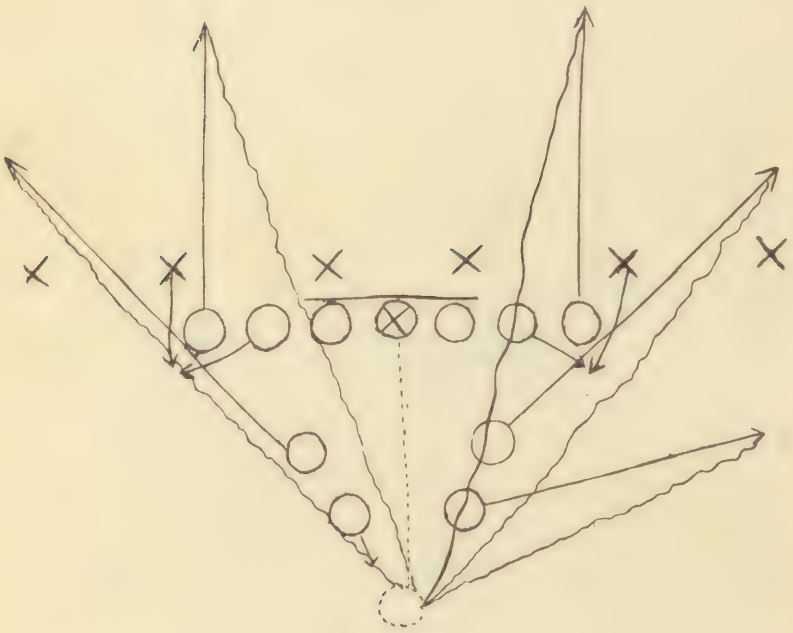

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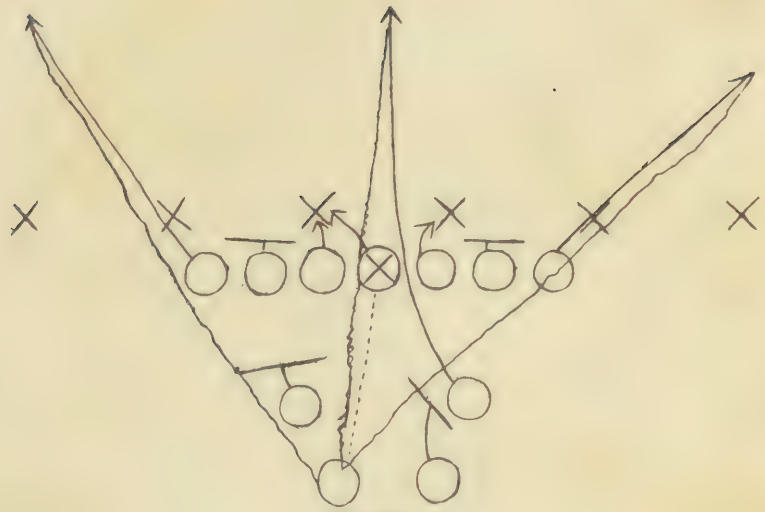

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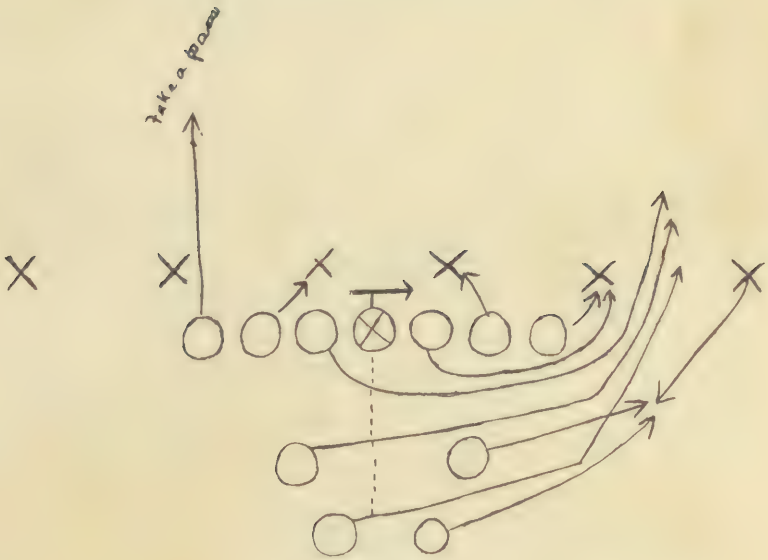

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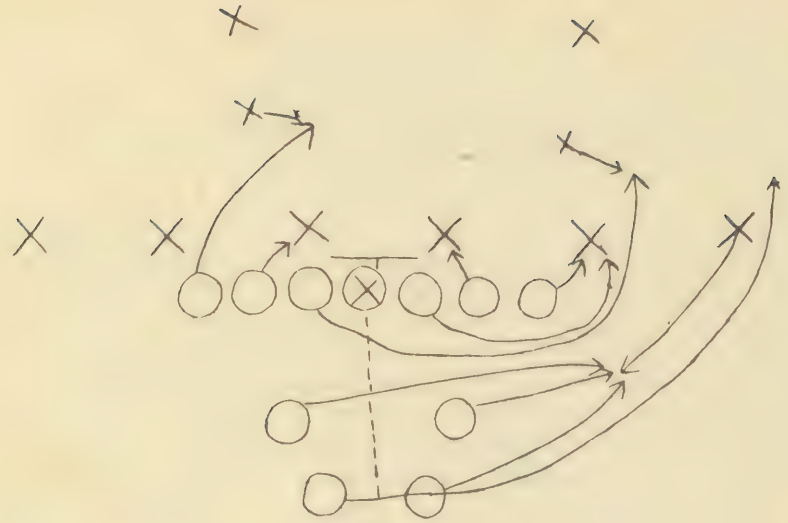

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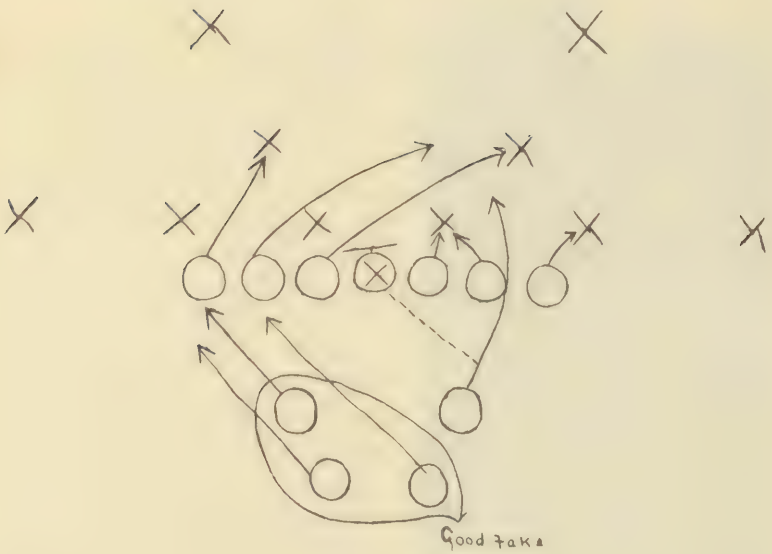

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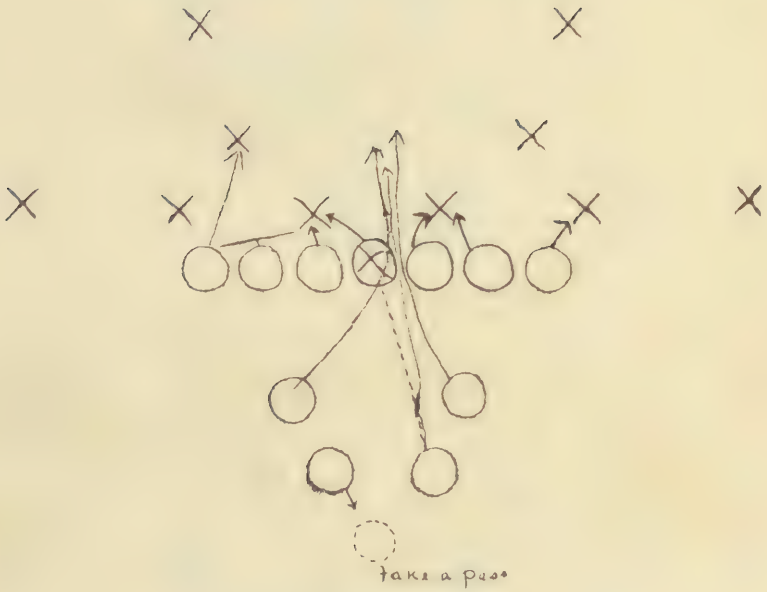

Play No. 10

BASEBALL

BASEBALL

BY J. N. WILSON

Baseball Instructor, formerly pitcher with Washington, of American League

TEST "C"

93. Rules.—To satisfaction of instructor.

94. Diamond.—The diamond is laid out with right angles at each base and 90 feet between bases. In laying out a diamond select the spot for home plate and run a tape in the direction you want second base. Mark the pitcher's box 60 feet 6 inches and second base 127 feet 3 and $\frac{3}{8}$ inches. With home plate as center and a radius of 90 feet describe an arc at first and third. With second base as center and 90 feet radius, describe arcs at first and third; the points of intersection will be first and third, with a distance of 127 feet, 3 and $\frac{3}{8}$ inches between them and 90 feet between each base.

95. Pitching.—Positions: There are two positions that a pitcher takes on the rubber, (a) No one on bases he takes position with both feet in contact with the rubber; (b) with a man on base and a possibility of his stealing, the pitcher places one foot in contact with rubber and the other in front, which will enable him to deliver the ball to the plate more quickly.

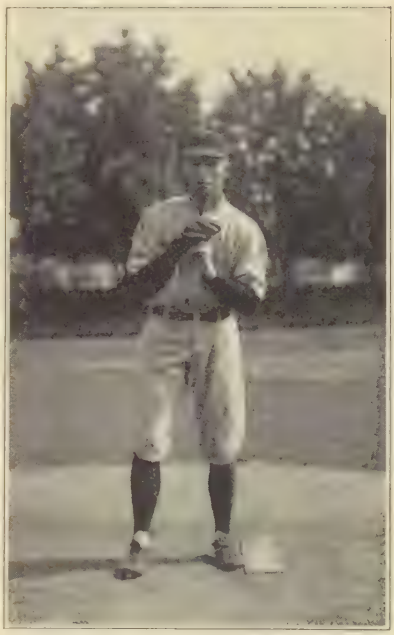

FIG. 27. Position of Pitcher When There is a Chance for Base Stealing

96. Batting.—Batting has always been the big factor in offensive baseball. To be a good batter usually means a successful ball player. The greatest pleasure of the game is batting, and is practiced more than anything else. Batting is a gift of unusually good eyesight, plenty of nerve, and development of good form. There are various positions taken at the plate which bring results, but a player must adopt one that he has confidence in and stick to it. When a batter steps to the plate and takes his position he should concentrate on the thing he is there for, be determined,

FIG. 28. Position of Pitcher When There is No Chance for Stealing Base

study the pitcher, watching every move and follow the ball from the pitcher's hand until it reaches the plate. Never swing unless the ball is over the plate between the knees and shoulders unless a signal calls for it. Swing with arms free, elbows away from the body, turning body and lunging toward pitcher with a moderate stride; when bunting for sacrifice, get set early, sliding outer hand to the middle of bat and reach out to meet ball. When bunting for hits, disguise your intention and lay the bat on ball, getting a running start. Batting slumps are usually caused by the loss of confidence and are sometimes quickly remedied by changing the weight of the bat and taking an easier swing, gradually getting into the old stride. Much depends upon the stride, being careful to time it with the swing and not stepping too far, as it has a tendency to take the eye off the ball.

97. Catching.—The catcher must be a close student of the game and be a good judge of a batter's weakness. He must encourage the pitcher and keep him working slowly. In giving signals to his pitcher he must be careful that the coaches on base lines cannot see them. The catcher's position behind the bat should be a slight crouch directly in back of plate with

FIG. 29. Throwing to Second Base

feet spread far enough to enable a quick start in any direction. His body should be leaning slightly forward with arms extended, making a target of the glove for the pitcher. In shifting for wide throws, he should get his body square in front of the ball whenever possible. He should keep close to the batter except with a man on second, and a probable steal with right hand hitter at bat; in this case he should play about two feet deeper. On foul tips, get the mask off quickly; eyes up and start fast. A catcher's throwing means much to a team; his throwing is done with a quick motion, stepping forward with the left foot, drawing the ball back of the ear and getting the ball away fast with an overhand throw.

FIG. 30. Position at Plate

98. Base Running.—This requires lots of practice to develop. A good

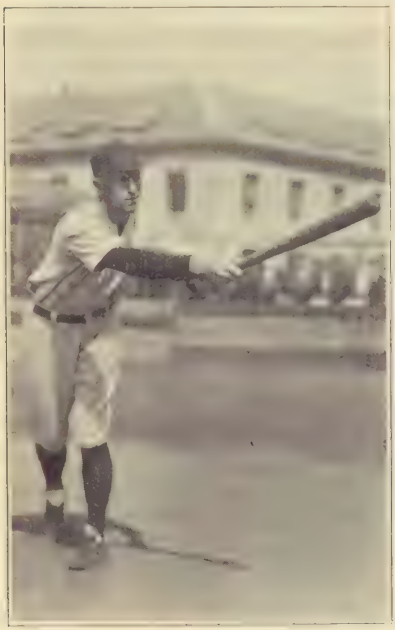

FIG. 31. Following Through on Swing

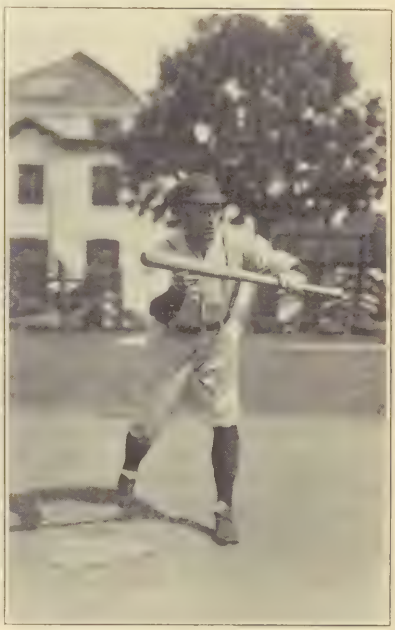

FIG. 32. Bunting

FIG. 33. Catcher Giving Target for Pitcher

FIG. 34. Giving Signals

base runner is usually fast but many fast men are not good base runners for the reason that they are not quick thinkers and do not know how to get a lead and quick start. To be a good base runner, a player must think and act quickly, study the pitcher's motion, and slide on every play that is close, throwing the body away from the fielder making the play and hooking the upper toe in the bag or plate. In running bases, it is necessary to get a quick, fast start from the plate, and run out every ball to first base at full speed. Take no chances on bases when your team is three or four runs behind or when your team is hitting hard. Take chances when the score is close and your team is not hitting. When stealing, get a good lead, but disguise your intentions. Watch for coach's signal when rounding a base. Be alert at all times, worrying the opposing pitcher, but do not get caught too far off the bag. Study the rules, as there are various ways of getting out, such as interfering with a fielder or being hit by a batted ball, passing a runner, and not touching bases.

99. Infielders.—First: an infielder must be good at handling throws, as half the putouts in a game are made at first base. He should vary his position in the field, playing a little deeper and closer to the foul line when a left hand batter is up. With a runner on first, he covers the bag, holding

the runner close and preventing a big lead for a steal. In taking throws from a team mate, he should place both feet before the fielder throws the ball, about four inches from the bag between the bag and fielder, so that in case the throw is wide to either side he can shift with a glide, getting the full benefit of his reach. If the throw is wide to the right, shove off with the left foot, extending the right leg sideways and placing left foot

FIG. 35. Hook Slide

FIG. 36. Tagging a Man Sliding

on the bag. Shift to left, shove off with right foot. First baseman must be on toes to field bunts and be good at handling ground balls. Second, short and third are positions that require quick thought, accurate throwing, clean fielding, and team work. An infielder's territory is as far as he can cover without interfering with a team mate having an easier chance. He must learn to catch the ball and put it on the runner in the same motion. The second baseman should cover first on any ball hit toward the first baseman. He should cover second on any ball hit toward shortstop or third baseman. Shortstop covers second on a ball hit toward first or second baseman. He covers third on a ball hit toward third baseman. Infielders must know inside baseball, gather every signal given by the catcher, and be on toes for a quick start in any direction.

FIG. 37. Position of 1st Baseman Before Ball is Thrown to Him

FIG. 38. Position After Shift

FIG. 39. Taking a Low, Wide Ball

FIG. 40. Covering 2d or 3d Base for a Throw

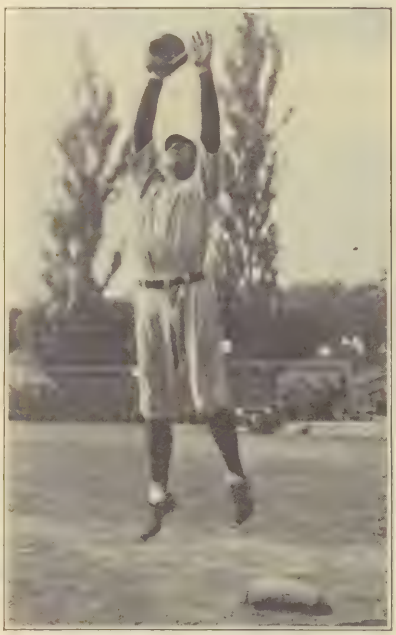

FIG. 41. Position for High Throw

FIG. 42. Position for Infield

100. Outfielders.—Outfielders are usually good batters but must be able to catch flies, handle ground balls and get the ball to the infield fast. In catching flies the fingers should be pointed up on ball above the waist and down on balls below the waist. Getting a quick start on the crack of the bat and turning your back to the ball when knocked over your head must be learned by every outfielder. Throw the ball to the infield to the base ahead of runner. Shift position according to wind. With man on base figure where the probable play will be if the ball is hit to you. Back up throws to every base. Right fielder backs up first and second; center fielder backs up second and left fielder backs up throws to third and second. Call your play when you are sure of it, preventing collisions.

FIG. 43. Fielding Ball

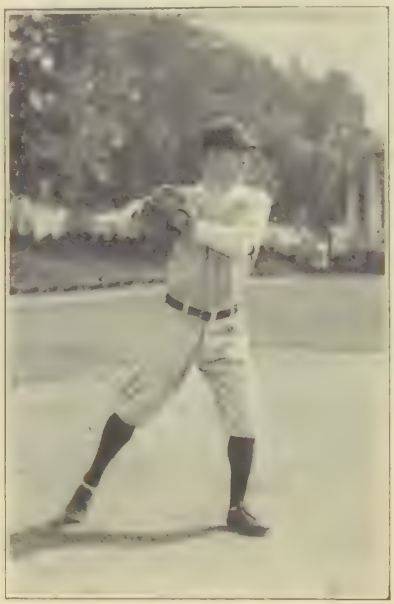

FIG. 44. Starting Throw

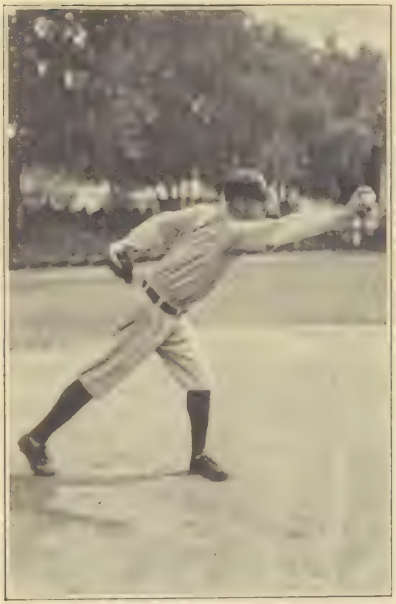

FIG. 45. Finish of Throw

FIG. 46. Outfielder Taking a Fly

TEST "B"

101. Condition.—The condition of baseball men does not play quite as important a part as in football, basketball, etc., but this is very often overlooked. The pitcher undoubtedly does the main part of the work and therefore should be very careful to keep in good trim. Condition is divided into three distinct classes, each being of great importance,—physical, mental, and condition of arm. A player's physical condition is controlled by his habits; his mental condition is controlled by good feeling toward team mates, with plenty of nerve and courage. Arm condition is controlled by conscientious and careful training.

102. Scoring.—The following summary of a standard method of scoring is suggested by Rule 86:

The score made in each inning of the game and the total runs of each side in the game. The number of stolen bases, the number of sacrifice hits (including sacrifice flies), if any, made by each player. The number of two-base hits, if any, made by each player. The number of three-base hits, if any, made by each player. The number of home runs, if any, made by each player. The number of double and triple plays, if any, made by each team and the players participating in same. The number of runs batted in by each batsman. The number of innings each pitcher pitched

in. The number of base hits if any made off each pitcher, and the number of legal at bats scored against each pitcher. The number of times, if any, the pitcher strikes out the opposing batsman. The number of times, if any, the pitcher gives bases on balls. The number of wild pitches, if any, charged against the pitcher. The number of times, if any, the pitcher hits a batsman with a pitched ball, the name or names of the batsman or batsmen so hit to be given. The number of passed balls by each catcher. The time of the game. The name of the umpire or umpires. To determine the percentage of Games Won and Lost, divide the total number of games won and lost into the number won. To determine batting averages, divide the total "Times at Bat" into the total number of base hits. To determine fielding averages, divide the total put-outs, assists and errors into the total of put-outs and assists. In all cases where the remaining fraction is one half or over, a point is added to the average.

TEST "A"

103. The Base Umpire.—This official makes all decisions at first, second or third bases, calls balks, interference by a base-runner, running out of base line, etc. An umpire should never change his decision when there is a question of judgment alone involved, but is compelled to change his decision on a point of rules when shown that he is wrong. Umpiring is a combination of good eyesight, plenty of nerve, a thorough knowledge of the rules and applying them absolutely impartially. In order to make correct decisions, the umpires must get as near the play as possible without interfering in any way.

104. Umpiring.—The double umpire system is by far the best, using the Umpire in Chief behind the catcher and the base umpire varying his position on account of the bases occupied. The umpire in chief is responsible for the proper conduct of the game, making all decisions on plays at the home plate, calling balls and strikes, fair and foul balls, infield fly, dead ball, and enforcing the ground rules which are decided before the game starts. The base umpire changes his position in the field so as to get as near as possible to the play at any base. With no one on base he stands outside the foul line about eight feet from first base, toward right field. Runner on first base, he stands in the diamond back of the pitcher. The same position is taken with runners on first and second, and first, second and third and infield out. If the infield is close with three on, he plays back of shortstop far enough to prevent interfering, going to the base where the play is made on the run.

105. Coaching.—Teach your men correct position and form in bunting, which will teach them to stand up to the plate, follow the ball, and lay

the bat against it. Be careful that early batting practice starts with a moderate swing, with arms free and stepping in to meet the ball, swinging only when the ball is over the plate between the knees and shoulders. Devote most of your time to batting from correct positions, stride, swinging and starts from the plate. Practice sliding early in the season on a soft grass spot and occasionally through the season, so as to have each player confident of his ability to slide when necessary. Practice signals for steal, hit and run, bunt, and squeeze plays, so that there is no chance of a mistake.

BASEBALL AS A SPORT

Note: Baseball is organized very much like football, and the outline given for football is applicable in many ways as to training tables, squads, etc.

BASEBALL IN GENERAL

106. Brief History.—Baseball was first played at Cooperstown, N. Y., eighty-one years ago. Credit for its origin is given to Major General Abner Doubleday.

107. Organization at Naval.—At the Naval Academy the oldest record now available of baseball is for 1871, at which time inter-class series were played, and possibly games with minor institutions in this vicinity. In 1901 baseball became a regular varsity sport.

CREW

CREW

Prepared from latest authentic information on rowing both in America and Abroad. Revised by several former navy crew captains. Notes by Lieut.-Commander P. V. H. Weems, U. S. Navy

TEST "C"

108. Rules.—To satisfaction of instructor.

109. Position at Oars.—Trunk, Feet, Hands, Shoulders.

Trunk: Sit so as to cover at least three inches of the seat, body square, as if unaware as to which side rowing is to be performed.

FIG. 47. Position at Oars

FIG. 48. Position of Feet

Feet: Place both feet in the strap and firmly against the stretcher, toes sloping outward.

Hands: The hands should be placed upon the oar about three inches apart. The two upper joints of the fingers performing the grasp, the lower joints being nearly straight. The thumb closes the grip, both thumbs underneath. The position of the thumb should not compel the lower joints of the other fingers to join in the grasp. The lower joints bent sufficiently to accommodate themselves to the roundness of the oar. The lower part of the palm of the hand and the ball of the thumb should not touch the oar at all. In this position the hands will give the freest play to the wrists.

FIG. 49. Position of Hands

FIG. 50. Position of Knuckles

Shoulders: Both shoulders should be set well back as related to the body, and should be stiffened. It is better, but not absolutely necessary, that the shoulders and back be erect. The principal requirement is that the back and shoulders be held in the position to give the greatest strength.

110. Movement of Stroke.—Reach—Start—Finish—Feather.

Reach: The back and legs should be used for the power of the stroke. Both hands, both arms, both shoulders, each loin, both legs and feet, should bear an equal strain throughout the stroke. The physical exertion of each side of the body and of the members belonging to it should be equal while rowing the stroke through. The beginning of the stroke should be the most forcible part, not only because the body is then at its greatest physical advantage but because a light boat, if touched ever so little before the maximum force is applied, slips away from the stroke. At the moment when the forward swing of the oarsman ceases, i. e., when at

FIG. 51. Reach Position

FIG. 52. Mid-Position of Stroke

the maximum reach and slide against the forward stop or in its most forward position the oar is "faced" perpendicularly to the water, the hands are raised as the leg and body drive is made and the oar is dipped to proper depth and the power applied with speed before the boat slides away from the stroke. It is at this catch that eight oarsmen must be in unison not only to drive the boat, but also to prevent the boat slopping over due to an oar getting in ahead of time.

Start: Legs—the legs should be stiffened against the stretcher the instant that the body feels the strain of the oar. They should be kept in this riding posture, supporting the body throughout the stroke. The body should be almost lifted from the seat simultaneously with use of oar and stretcher. Knees—The moment the water is caught at the commencement of the stroke the knees should be actually higher than the hands by about three inches. Head—Throughout the stroke the head should be held well up but not thrown back with face to the sky.

Finish: The stroke should be finished with the shoulders and the muscles that work them, the biceps being passive throughout the stroke. The best advantage is obtained when the body at the end of the stroke, makes an angle of twenty-two and a half degrees (one-fourth of a right angle) or even a little more, with the perpendicular. A long swing materially adds to the pace of the boat. Movements for finish: (arms out straight in front knuckles uppermost). Swing arms into chest by use of the shoulder muscles, bending the elbow joint as the arms come in, so as to keep the hands in the same plane; pull until the base of the thumb strikes the chest.

Feather: The thumb at its base should be the part of the hand which strikes the chest at the conclusion of the stroke, knuckles being uppermost; the stroke thus is rowed in the water to the last. Then, the hands should drop sharply about two inches and a half, the base of the thumb still touching the chest, and then, when by this method the oar has been raised edgeways like a knife out of the water, the turn of the wrist should take place. This makes up three motions: The touch on the chest, the drop, and the turn. In the feather the drop should come before the turn to avoid feathering under water. The stroke is thus divided in the description in order to show the different elements of the stroke. To an experienced oarsman snapping away the hands, while bending the wrists downward in time to have the oar pass the knees before the leg is bent sufficiently to cause the knee to foul the oar, is done automatically and to him it is practically one motion. While the oar comes out of the water edgeways, this does not mean perpendicularly, for the speed of the boat gives a component to the direction in which the oar leaves the water.

This result of course is in the direction in which the boat is moving. If the oar is feathered perfectly it comes out like a knife at a slight angle to the surface leaving a small whirl where it has made its exit. If a sort of feathery sheet of water runs off the blade as it leaves the water, it is feathered under water, the hands have turned while the oar is still in the water, and the oar, coming up spoonways, empties its contents as it reaches the surface. If the oar throws a slop of water aft as it leaves the water, the stroke is finished in the air, and a gradual drop of the hands has taken place before the hands reach the chest. That drop has come too soon, the hands have not maintained their plane. Test of a clean feather: Is the touch of the base of the thumb first against the chest; this insures that at least the oar has remained square to the end of the stroke; and if the hands preserve the same plane till after the chest has been thus touched, the oar will remain not only square but in the water to the last, and therefore doing work. The drop instantaneously elevates it from the water, and the turn which follows completes the feather.

Fig. 53. Feather

111. The Recovery. The action of shooting the hands from the chest for recovery should be rapid. The process of reversing the machinery instantaneously, of quickly bringing into play muscles converse to those which have just rowed the stroke through to the chest, does not come naturally to anyone, and with beginners it is a matter of extreme difficulty. The pace at which the hands leave the chest will depend upon the relative speed at which they reach the chest. The muscles of the legs, thighs, and loins should all join with those of the abdomen in the recovery, though necessarily the greater strain falls on the loins. The feet should draw the body from the strap by which they are held. Weakness of recovery:

FIG. 54. Position of Body After Feather

FIG. 55. Position of Body After Feather, Showing Oar

for the reason that the recovery is the weakest point in a man's rowing, too much care can not be taken in practicing this part of the stroke. The main stress should be laid on the elasticity of the hands, for without them the body can not recover, except at a great waste of power. The longer the weight of the body remains back, after motive power with the oar has ended, the more "way" is taken from the boat, while conversely, an elastic recovery facilitates it.

FIG. 56. End of Stroke, Moving for New Swing

An oarsman fails first on the recovery. The failure of the abdominal muscles usually produce the first signs of distress. The reach is cut off due to the failure to get into position of full reach in time to start the stroke, while sufficient strength remains to carry the stroke through once the oar is in the water. The instant the stroke is finished, with base of thumbs against the chest, the hands are shot downward and away while simultaneously a strain is put on stretcher strap with the toes, and with the leg muscles and the muscles of the stomach working together, the body is brought and the slide started forward, rapidly at first, then gradually, slowing to a dead stop at full reach. It is during the swinging

forward after the body has been snapped up to a nearly perpendicular position that most of the muscles can be relaxed and needed rest obtained. The effect of this swing is more than that of riding the seat while the boat moves from under the oarsman, the stretcher drawing up under him, giving a crouching position ready for the next stroke.

112. Analysis of Stroke.—The greatest physical power takes place at one time in the stroke, and the greatest mechanical power at another. The greatest mechanical power is when the oar is at right angles to the rowlock. The instant the elbow joint begins to bend the stroke greatly decreases in physical power. Yet this diminution of physical power takes place at a time when the mechanical power of the oar is greater than it was at the commencement of the stroke. The further the body swings back, the later is it necessary for the arms to commence their bend, and consequently a greater amount of that work at which the mechanical power of the oar is greater is done with still rigid arms, and with the use of the body and loins.

113. Faults.—Feathering under water, "loafing," uneven swing, faulty time, not rowing stroke home, swinging across boat, fouling in water, bending the arms too soon, bending only one arm, and the following:

"Bucketing"—pulling body to oar.

Washing out—pulling hands into lap.

Oar not properly faced—crab.

Oar too deep—loses efficiency.

"Clipping the stroke"—part of stroke lost in the air by not catching water at start of stroke. (To prevent this raise hands sharply as body and legs are thrown against the oar.)

These are the principal faults, which must be corrected for good oarsmanship.

114. Form.—Square shoulders, straight swing, elastic recovery, absence of doubling up at the finish, the hand, all result as a matter of course if care is exercised at the beginning. Last of all, if the feet are placed against the stretcher, with toes pointed apart, so as to open the knees, and the strain of the stroke is done from the loins and legs, the back is sure to do its work with as straight an action as is natural to do it.

115. "Feel" of the Boat.—No amount of description can do more than state the general principles and the theory of rowing to a new oarsman. There must be a musical rhythm of catch of oar, drive of body and legs, snap away of hands, swing forward of body to the crack of the rowlocks, and the Hep! Hep! of the coxswain. Without looking at the blade the oarsman must learn to know when the blade is leaving the water

clean, and is catching the water without "clipping" the stroke and splashing when he hits the water. In gripping the oar extremes should be avoided. There must be sufficient grip exerted to insure control of the oar, and in choppy water this must be increased in order to avoid crabs. On the other hand an excessive grip deadens the forearm restricting that flexibility of the wrists which is so essential for a proper feather. (The writer has the painful memory of having committed this fault while stroking a crew in a race against Harvard—a good portion of the energy put into the "squeeze" which should have gone into the "pull" on the oar.) Unless the back is very strong there will be a tendency to cup the back and shoulders over the chest during the last half of the course. This fault should be avoided if possible as it reduces the lung capacity, and restricts the heart action. The stroke should be carried through with blade just covered. If blade is too deep the oarsman expends physical power without obtaining an adequate return. One is likely to feel that an oar just covered does not furnish sufficient resistance, when as a matter of fact, if each stroke is supplied through the water with sufficient speed, there is an outlet for an unlimited amount of power. It is a question of force times speed of stroke. Also with the blade just covered, the maximum leverage is obtained.

TEST "B"

116. Commands for Manning and Handling a Shell.—

Shell in rack—

1. Around the boat!
2. Ready!
3. Lift!

As crew carries shell to water coxswain should direct them to the edge of float.

At the float—

4. Toes over!
5. Over!

After oars are shipped, and rudder shipped—

6. Ready all!
7. Embark!

To change direction quickly order—Hold her port! Take her up starboard! or vice versa. To stop headway order—Hold her all!

Additional orders—

Back her down starboard!

Back her down port!

117. Coxswain.—On the course the coxswain gives double count, i. e., Hep! Hep! for time oars dip into and come out of water; steers straight

course and keeps crew fully informed of distance to go and position of opponent crews, except when so far behind that coxswain considers better time will be made if crew is not informed of amount of opponent's lead.

118. Nomenclature for Eight-Oared Shell.—
Cost $1200 to $1600.
Length 60′ beam 28″ depth 10″
Chief builders Davy & Sons, Cambridge, Mass.
Wm. Barney, Philadelphia.
Wood: Spanish cedar.

119. Nomenclature of Oar.—

1. Handle,	4. Leather,
2. Loom,	5. Small,
3. Button,	6. Blade.

TEST "A"

120. Officiating.—All boat races are started in following manner: The Starter, on being satisfied that the competitors are ready, shall give the signal to start.

If the Starter considers the start false, he shall at once recall the boats to their stations; and any boat refusing to start again shall be disqualified.

Any boat not at its post at the time specified may be disqualified.

The Referee may act as Starter if he thinks fit; where he does not so act, the Starter shall be subject to the control of the Referee.

Boats shall be started by their sterns, and shall have completed their course when their bows reach the finish.

Water: A boat's own water is its straight course, parallel with those of the other competing boats, from the station assigned to it at the start to the finish.

Each boat shall keep its own water throughout the race, and any boat departing from its own water shall do so at its peril.

CREW IN GENERAL

121. Brief History of Crew.—There are few records of crew performances to be found. Rowing as it is performed today originated in England early in the Eighteenth Century.

In 1715 Mr. Doggett, an English comedian, founded a crew race which has survived down to the present day. At that time the watermen of England had to serve as apprentices for seven years, during which time

they could not play for hire on their own account. When they had served their time they became "free of the river" on payment of certain fees to the Corporation.

In order to encourage good oarsmanship, prizes which paid the fees of freedom, and bestowed a "coat and badge of merit" were given by patrons of aquatics. Doggett's prize is the oldest of its class.

The first English University race took place in 1829, over the course from Hambledon Lock to Henley between the eight-oared crews of Oxford and Cambridge Universities. The Oxonians won the race easily. This pair of University crews produced men of more than unusual celebrity in after life; two embryo bishops, three deans, one prebendary, two lawyers and one doctor. In the records of the two Universities a full list of the crews engaged in this and all the other contests may be found.

The English Henley Regatta was instituted in 1839, as a result of the various eight-oared matches, which had been rowed on that part of the river during the ten years preceding. The Universities no longer compete at Henley.

In 1873, the sliding seat came into use. This did not introduce new principles in rowing, though it lengthened the stroke and reduced the rowing time.

In these days of keelless boats more practice is needed, in order to do justice to the craft, than when heavier and steadier craft were used; and as the Annual Putney Match between universities is considered by them to be of more importance than any other contest, they devote their best energies to that.

The American Henley is conducted in much the same manner as the English Henley. The distance (one and five-sixteenths miles) is the same; but the best American time for the distance is much faster than the English time. The American record is 6 minutes, 25 seconds, held by University of Pennsylvania; while the English record is 6 minutes and 53 seconds.

The World's Champion eight-oared crew of the Naval Academy, representing the United States at the Olympic games in 1920, covered the Henley distance in practice on the Severn river course, in the fast time of 6 minutes and 12 seconds. The Navy's fastest time in competition is 6 minutes and 30 seconds.

Notwithstanding the fact that the American records for short distances are better than the English records; the oarsmen of Great Britain have made better time for the long distance races. The English time for four miles is 18 minutes and 45 seconds; while the American record is 18 minutes and 53 seconds.

The winning of the 2,000 meter race at the seventh Olympiad, Antwerp, Belgium, in 1920, by the Naval Academy eight-oared crew brought American oarsmanship to a triumphant climax. Until that time American oarsmanship was considered far inferior to the English style of rowing. Wherever England is mentioned in reference to sport, one immediately considers her wonderful crews; and although the rowing crown is now held by the American Navy, England will always be the most dangerous contender for the World's championship title.

CREW AS A SPORT

122. Government of Rowing.—The National Association of Amateur Oarsmen is the senior rowing association of America. It holds the same relative position in the rowing world that the National Collegiate Athletic Association holds in other college athletics.

123. Organizations Under N. A. A. O.—The following organizations are grouped under the N. A. A. O., and each of these associations is divided into associations and clubs.

American Rowing Association.
Central States Amateur Rowing Association.
Hudson River Rowing Association.
Intercollegiate Rowing Association.
Long Island Rowing Association.
Middle States Regatta Association.
New England Amateur Rowing Association.
New York Rowing Association.
Pacific Association of Amateur Oarsmen.
Southwestern Amateur Rowing Association.
Western Massachusetts Amateur Rowing Association.
International Amateur Rowing Association.
Canadian Association of Amateur Oarsmen.

124. Navy Membership.—In the above group the Naval Academy is included under the American Rowing Association, which has the following members:

Columbia University Rowing Club.
Harvard Athletic Association.
Navy Athletic Association.
Athletic Association, University of Pennsylvania.
Philadelphia Barge Club.
Union Boat Club, Boston, Mass.
University Barge Club, Philadelphia, Pa.

125. The American Rowing Association.—Was founded December 6, 1902. This association is governed by a Board of Stewards, composed of twenty-one members.

126. Regattas.—Under the N. A. A. O. a National Regatta open to all members is held annually. The first national regatta was held October 8, 1873, on Schuylkill River, Philadelphia, Pa., on one and one-half mile course; classed as lake water.

127. Events at Annual N. A. A. O. Regatta.—The races at each regatta shall consist of:

Single-scull Shells, Intermediate.
Single-scull Shells, Senior.
Single-scull Shells, Champion.
Single-scull Shells, Senior, quarter-mile dash.
Double-scull Shells, Intermediate.
Double-scull Shells, Senior.
Quadruple-scull Shells, Senior.
Four-oared Shells, Intermediate.
Four-oared Shells, Senior.
International Four-oared Shells, Senior.
Eight-oared Shells, Intermediate.
Eight-oared Shells, Senior.

128. Competitions.—Definitions of classes are as follows:

Junior

A Junior Sculler is one who has never won a scull race.

A Junior Oarsman is one who has never been a winning oarsman.

Intermediate

An Intermediate Sculler is one who has never won an Intermediate or Senior-scull race.

An International Oarsman is one who has never been a winning oarsman in an Intermediate or Senior race.

Senior Single-Scull Race

The Senior Single-Scull race shall be open to all duly qualified scullers, excepting the winners of this race in previous regattas of this Association. The successful competitor at each Regatta shall be entitled to compete in the championship race.

Championship Single-Scull Race

The championship Single-scull race shall be open only to duly qualified winners of the Senior Single-scull race, and if there should be only one

competitor he shall upon rowing over the course, be declared entitled to the honor of championship.

College Oarsman

A winning oarsman in a Varsity race is a Senior.
A winning oarsman in any other Intercollegiate race is an Intermediate.

129. American Rowing Association Events.—The National Course is 1 mile, 550 yards, straightaway, Schuylkill River, Fairmount Park, Philadelphia, Pa. Under this association the Sixteenth Annual Regatta was held May 16, 1920.

1. The Race for First Single Sculls for the Farragut Challenge Cup.
2. The Race for Second Single Sculls.
3. The Race for First Double Sculls for the Schuylkill Challenge Cup.
4. The Race for First Four Sculls (Centipedes).
5. The Race for First Four-Oared Shells for Puritan Challenge Cup.
6. The Race for Special Four-Oared Shells for United States Navy Cup.*

*This race is open only to crews from Colleges and Boat Clubs eligible as "Second" Fours.

7. The Race for First Eight-Oared Shells for the Stewards' Challenge Cup.
8. The Race for Special Inter-Club Second Eight-Oared Shells. This race is not open to crews from colleges, or from college rowing clubs.
9. The Race for Junior College Eight-Oared Shells for the New England Challenge Cup. This race is open to college or university "second" crews, none of the members of which has a seat in the "Varsity" Eight at the date of the Regatta, provided that no crew shall be eligible if more than two of its members shall have previously rowed in a varsity eight in a four-mile intercollegiate race.
10. The Race for Interscholastic Eight-Oared Shells for the Franklin Challenge Cup. This race is open only to crews all of whose members are bona fide members of preparatory schools or schools of equivalent grade and all of whom are under the age of 21 years.
11. The Race for Freshman Eight-Oared Shells. This race is open only to Freshman crews of colleges or universities.

The "first" races are open to amateurs in good standing.

All "second" races are open to amateurs in good standing, but no crew shall be eligible to enter a "second" race if,

(a) More than one-half of its members are also entered for the corresponding "first" race at the regatta, or

(b) More than one-half of its members have rowed in a crew winning the same race, or the corresponding "first" race at any preceding regatta of this association.

(Under this rule a sculler may not enter in both the single scull races at the same regatta.)

OFFICIATING

130. Outline of Officiating.—Starting: All races shall be started in the following manner—The Starter, on being satisfied that the competitors are ready, shall give the signal to start.

If the Starter considers the start false, he shall at once recall the boats to their stations; and any boat refusing to start again shall be disqualified.

Any boat not at its post at the time specified may be disqualified.

The Referee may act as Starter if he thinks fit; where he does not so act, the Starter shall be subject to the control of the Referee.

Boats shall be started by their sterns, and shall have completed their course when their bows reach the finish.

A boat's own water is its straight course, parallel with those of the other competing boats, from the station assigned to it at the start to the finish.

Each boat shall keep its own water throughout the race, and any boat departing from its own water shall do so at its peril.

COACHING CREW

131. Severity of Rowing.—Rowing is one of the most violent forms of physical exercise. All the larger muscles are called into play, and a steady expenditure of maximum power for a period ten to twenty minutes or more is a severe strain, so much so that only those physically sound, especially as regards the heart and lungs, should take up rowing, where competitive racing is indulged. On the other hand rowing is an excellent exercise for anyone when taken for exercise only.

132. Change in Weight.—College oarsmen frequently reduce four pounds or more in one afternoon's work. This loss of weight is necessarily compensated by eating and drinking more than the average amount. It is well known that under these conditions a person must take precautions against constipation, indigestion, and poisoning.

133. Diet.—A simple wholesome diet is best. An oarsman's appetite will usually give a relish for plain food, and this will be eaten in sufficient quantities. If a training table is formed, care must be taken to see that the "training food" is not too restricted. There should be a good variety of food.

134. Over-Training.—One of the worst conditions a crew can get into is "staleness" or over-training. The coach must use his judgment in the amount of training and the length of time in which the crew is in training.

TRACK AND FIELD

TRACK AND FIELD

BY L. H. MANG

Headmaster in Physical Training, U. S. Naval Academy. Coach Navy Contingent Track Team, Olympic Games, Antwerp, Belgium, 1920.

TEST "C"

SPRINT RUNNING

135. The Start.—Dig a hole for your left foot about four inches back of the starting line, the position of the right foot is then found by placing the right knee on the ground opposite the left foot. At this point dig the hole for your right foot.

FIG. 58 Get Set.

136. On Your Mark.—Put your left foot in the forward hole and your right foot in the other hole, kneel down on your right knee and place both hands on the ground a few inches in the rear of the starting line, muscles relaxed.

137. Get Set.—At this command the right knee is raised from the ground and most of the weight carried forward on the left leg so that the body is almost off balance, the weight being distributed on the left leg and the arms. The fingers and thumbs are turned sideways in line with the starting mark.

138. Go (Pistol Report).—Spring away from the mark with all possible effort at top speed, pushing off with your arms and legs at the same time,

taking care that the body is not straightened up too quickly. Do not make the first stride too long.

FIG. 59. Go (Pistol Report)

139. The First Ten Yards.—The body should be slightly inclined forward and not straightened upward too quickly, this latter movement has a tendency to slow a man up. There is less resistance if the body is in this inclined position and this will make a man about one yard faster in the first ten yards.

140. Form in Sprint Running.—Raise the knees high in front of the body, keep the feet pointed fore and aft, drive them down to the ground getting a pulling and pushing movement. Do not raise them too high in the rear. The arms should work in unison with the legs, when the left leg is brought forward the right arm is swung forward, etc. The arms should not be held straight, but bent at the elbows and swung forward, this forward swing of the arms aiding in carrying the body forward. A common fault is to swing the arms across the body; this movement has a tendency to turn the body sideways, which impedes the forward momentum. Do not turn around in a race as this very often loses a race which might have been won.

141. The Finish.—An added effort must be made in finishing a race. Very often a race is lost in the last few yards by slowing up or by turn-

ing the head. Do not slow up until after you have crossed the mark. A good form for finishing is to throw the body forward on the last stride and at the same time turn the body so that one shoulder is in advance of the other shoulder. This sometimes enables a man to win a race by inches over an opponent who does not make use of the jump at the finish. The tape must be breasted and not seized with the hands.

142. Drawing for Positions.—The pole is the most desirable position on a circular track. Drawing for positions in a race is usually decided by the toss of a coin, the man winning the toss has the choice of lanes, etc. Positions and lanes are numbered and start from the pole (the curb on the inside of the track).

DISTANCE RUNNING

143. The Start.—The standing start is preferred to the crouching start in distance running, as it is not so necessary to get off from the mark as fast as it is in sprint running. The advanced foot is about four inches in the rear of the starting mark, with the upper body slightly inclined forward.

144. Form in Distance Running.—The knees should not be raised as high as in sprint running and the heels should not be raised too high in the rear. A long, even, springy stride is best. The arms should be swung straight forward, this aids the body in the forward movement. Run in a straight line keeping the feet fore and aft. The upper body should be slightly inclined forward. A common fault is to turn the feet outward, this tends to shorten the stride and slow a man up considerably.

145. Judgment of Pace.—It is very important for a distance runner to be able to judge pace. He should be able to tell just how fast he is running each lap, this can only be mastered by constant practice. A good way to learn to judge pace is to run with an experienced runner and follow his pace, or to have some one hold a watch on you while you are running, coaching you and calling out aloud just how fast you are running. By following this practice you will in a short time be able to judge your own pace.

RELAY RACES

146. Various Types of Races.—There are quite a number of relay races. At the Olympic Games the 400 meters and 1600 meters are run; four men on a team each man running 1/4 of the distance. Other relay races conducted in this country at athletic games are—one mile, two miles, and four miles. Four men compose a team, each man running 1/4 of the distance. Sprint medley relay with four men on a team, the first man runs 440 yards, the second man 220 yards, the third man 220 yards, and

the fourth man runs 880 yards. Distance medley relay—four men on a team. The first man runs 440 yards, the second 880 yards, the third 3/4 of a mile, and the fourth man runs one mile.

FIG. 60. Holding the Baton

147. Passing the Baton and Keeping Proper Course.—The baton must be carried by each runner of a team and is passed from one runner to the other within a certain zone (this zone is known as the touch-off zone) which is ten yards on either side of the starting line and is marked on the track with whitewash. The baton must be passed and not thrown. It is made of light material, wood or cardboard, and is about twelve inches in length. The position drawn by a team shall be maintained throughout the race. Example—If the first runner of a team starts in fourth position from the pole his relief must take the same position when receiving the baton. After receiving the baton he may cut in and take the pole, providing he does not interfere with another runner. The team running on the outside position is at a disadvantage on account of running a few yards more than the team having the pole.

HIGH AND LOW HURDLES

148. Variety, Height and Distance.—High hurdle races are 120 yards in length. There are ten flights of hurdles, 3 ft. 6 in. high. The distance

FIG. 61. Passing the Baton

between hurdles is ten yards, from the mark to the first hurdle is fifteen yards, from the last hurdle to the finish line is fifteen yards. Low hurdle races are 220 yards in length. There are ten flights of hurdles, 2 ft. 6 in. high, the distance between hurdles is 20 yards, from the starting mark to the first hurdle is 20 yards, from the last hurdle to the finish line is twenty yards. There is also a 440 yard hurdle event which is usually put on the card as a special event at such meetings as the Penn-Relays, the same number of flights, hurdles are 2 ft. 6 in. in height and the distance between hurdles is forty yards (this, however, is not a regular intercollegiate event).

FIG. 62. High Hurdles

FIG. 63. Low Hurdles

149. Strides Between Hurdles.—The high hurdler takes three strides between hurdles; taking more than this number would slow a man up. The low hurdler takes seven strides between hurdles. If seven strides can not be mastered eight strides must be taken which necessitates changing the jumping foot over every other flight of hurdles. Some runners naturally have a short stride and must be content with the eight strides, which is a slight disadvantage.

150. Form.—The hurdler must practice getting off the mark fast so that he will be running at almost top speed when he reaches the first hurdle. The theory is to just clear the hurdle, do not jump too high as this loses time. When going over the hurdle the advanced leg should have a slight bend to the knee, the rear legs trails along with the foot turned outward to the side. With the foot turned in this manner there is less danger of knocking down the hurdle. When lighting on the other side of the hurdle the foot must be pointed straight forward, if turned outward there is danger of losing the balance and falling forward.

FIG. 64. Throwing the Javelin, First Position

151. Throwing the Javelin.—The javelin is held with the thumb and the first two fingers of the hand on that part of the javelin which is wrapped with cord. The run required is about twenty yards. The javelin thrower starts running at this point carrying the javelin above the right shoulder,

FIG. 65. Throwing the Javelin, Second Position

about two strides from the toe board; hop on the right foot and swerve to the left, extend the right arm backward, turn the body to the left changing the position of the feet so that the right foot is forward and the left foot backward, at the same time the right arm is brought forward and the javelin released. The arm movement is similar to that of throwing a baseball.

FIG. 66. Throwing the Javelin, Third Position

FIG. 67. Putting the Shot, First Position

FIG. 68. Putting the Shot, Second Position

152. Putting the Shot.—The shot weighs sixteen pounds and is put from a circle seven feet in diameter at the front of which is a toe board. The shot putter stands at the back end of the circle in a relaxed position with the shot in the right hand above the right shoulder (the shot well up on the fingers) elbow close to the side; hops forward on the right foot—after the foot touches the ground the body is quickly turned to the left, the right foot is brought forward and the left foot backward, at the same time the arm is extended forward at an angle of about 45 degrees and the shot released. In this movement of turning the body the final effort should be made—if executed correctly the greatest momentum is obtained at this point.

FIG. 69. Putting the Shot, Third Position

TEST "B"

153. Running High Jump.—The first thing a high jumper should do is to find his marks so that he can get the proper take-off. Two marks are best, a back mark about fifteen yards from the take-off and a front mark about five strides from the take-off. These marks can easily be found by starting from the back mark and running through without attempting to jump. By doing this the mark can be changed accordingly.

154. Form for Running High Jump.—(Jumping from the left foot.) After finding the proper marks the jumper starts his run from the back mark with an easy springy stride increasing his speed as he nears the take-off (the last few strides should be fast), when the left leg hits the take-off the jumper springs upward, the right leg is swung slantingly forward—when above the cross-bar the body is quickly turned to the left, the left arm swung backward and the right arm swung forward, at the same time the right leg follows the left. This quick turning of the body carries the hips away from the cross-bar. The arm swing aids the body in turning. The jumper lands in the pit facing in the opposite direction. This style of jumping is best and is used by the majority of the present day jumpers.

FIG. 70. Form, Running High Jump, First Position

155. Running Broad Jump.— (Jumping from left foot.) Two marks are necessary, a back mark about ninety feet from the take-off and a front mark about fifty feet from the take-off. These marks can readily be found by starting from the back mark and running through at top speed, using a natural stride. Have some one stand by to see where the left foot hits, then it will be a simple matter to move your marks forward or backward accordingly. On rainy days it may be necessary to shorten the marks on account of the track being heavy. Speed and spring are essential.

156. Form for Running Broad Jump.—The jumper starts his run from the back mark increasing his speed with every stride; when crossing the front mark he should be traveling at top speed. When nearing the

FIG. 71. Running High Jump, Second Position

FIG. 72. Running High Jump, Landing

take-off he should be careful not to lengthen his stride; (reaching for the take-off) it is a good plan to shorten the last two strides in order to get the proper elevation (the long stride throws a runner off balance). The left foot should be pointed straight forward when striking the take-off, the spring is then executed by pushing off from the take-off with all possible effort. The left leg follows the right and both knees are drawn up in front

of the body; the arms assist by swinging forward. Just before lighting the legs are straightened forward, landing with feet together in a sitting position. Some broad jumpers have the natural ability to get a hitch (similar to a walking movement in midair) which aids them in keeping the proper balance and adds distance to the jump. Not every jumper can acquire this style as it is more or less a natural gift.

FIG. 73. Broad Jump

FIG. 74. Broad Jump, Take-Off

POLE VAULT

157. Marks, Take-Off, etc.—The pole vaulter should have two marks, a back mark about 100 ft. from the take-off and a front mark about 40 ft. from the take-off. The present day vaulters use a bamboo pole 16 ft. long with a blunt wooden peg at the lower end. The pole should be wrapped with electric tape at intervals of eight inches, this strengthens the pole and affords a better grip for the hands.

158. Form.—(For a right handed vaulter.) The vaulter places his pole in an upright position at right angles to the cross-bar, the point where the pole touches the cross-bar is the proper place for the right hand to grasp the pole. Some vaulters who are exceptionally strong in the arms grasp the pole about eight inches lower than the bar. The vaulter stands at the

back mark ready to start his run to the take-off, the right hand grasps the pole in the rear of the body with the knuckles turned downward, the left hand grasps the pole in front of the body with the knuckles turned upward, the point of the pole should be on a level with the head. The run to the front mark should be of an even springy stride, when crossing the front mark the speed should be increased, as the left foot hits the take-off the pole is planted and the left hand is shifted up to the right hand, the vaulter now leaves the ground by pushing off with the left foot, pulling with the arms and shooting the body feet first up over the cross-bar, at this point the body with a quick snap is turned to the left and the hips raised as high as possible (this later jack knife position raises the chest clear of the cross-bar), the grasp is released, the arms swung upward and the vaulter drops to the pit landing facing in the opposite direction. The vaulter should be careful not to leave the ground before planting his pole, this puts a sudden strain on the pole and is liable to snap it off.

FIG. 75. Broad Jump, Finish

FIG. 76. Pole Vault, First Position

FIG. 77. Pole Vault, Second Position

FIG. 78. Pole Vault, Third Position

FIG. 79. Pole Vault, Fourth Position

DISCUS THROWING

159. Form.—(For right handed man.) The discus is thrown from a circle 8 ft. 2½ in. in diameter. The discus thrower stands at the back end of the circle, his right foot just inside the mark and his left foot forward; the right hand which holds the discus is swung in a semi-circular movement in back of the body at the same time the knees are slightly bent, then the arm is swung forward and the knees straightened, the left hand touching the discus to counterbalance it. The swing backward and forward is executed three times. On the next forward swing pivot on the left foot and carry the right foot forward and place it on the ground, pivot on the right foot and carry the left foot backward, then the pivot is again repeated on the left foot, bringing the arm forward and letting go of the discus. In order to get a good pull on the discus the arm should be carried well back of the body during the pivoting. The wrist should be held rigid with the knuckles of the hand turned upward, if the hand is turned upward or forward the discus will not scale properly, the result being a poor throw.

Some discus throwers use the double pivot, but up to the present time the single pivot seems to be more advantageous.

FIG. 80. Throwing the Discus, First Position

FIG. 81. Throwing the Discus, Second Position

TEST "A"

160. Terms used in Track.—Jumping the Gun: To leave your mark before the gun is discharged.

Setting the Pace: The man leading in a race. He is called the pace maker.

Decoy Runner: A man put in a race to mislead a runner by setting the pace either too fast or too slow.

To Box a Runner: To get a runner in bad position, example, one man in front and another to his right. This prevents him from getting the pole unless he runs wide. It is also called "pocketing."

Jostling or Elbowing: To shake up a runner by striking him with your elbows or touching him with any part of your person.

Off Fast: To leave your mark fast.

Pick It Up: If trailing behind make up lost ground.

Top Speed: Just as fast as you can go.

FIG. 82. Throwing the Discus, Third Position

FIG. 83. Throwing the Discus, Fourth Position

The Pivot: Turning the body while throwing the discus or hammer.

The Pass: To pass the baton in a relay race.

The Twist or Turn: Quick movements of the trunk employed in the shot, discus, pole vault and high jump.

The Hitch: Leg movements employed in the high jump and broad jump.

Planting: Placing the pole in the ground for vaulting.

The Swing: Hanging on the pole after leaving ground in pole vaulting.

The Jack Knife: A position when vaulting where the man is directly over the cross-bar and bends his trunk so that his upper body and legs are at right angles to each other.

The Pull Up: Pulling the weight up the arms while pole vaulting.

161. Officiating—The officials for a large meet are as follows:

A Games Committee
A Referee
Four Inspectors
One Scorer

One Clerk of Course
Five Assistant Clerks
One Announcer with assistants if necessary
One Marshal and two assistants
One Surveyor
One Physician
One Press Steward

For Track Events:

The Head Judge and four other judges
Three Timers
One Starter

For Field Events:

One Head Field Judge and eight other field judges or measurers.

The Directors in charge of any set of games have the authority to change the authorized games committee to make such additions to the list above as found necessary.

OFFICIATING

162. Games Committee.—This committee provides the grounds, equipment, officials, schedules, makes drawings for heats, and other details of an executive nature. On completion of a meet the Committee reports results by record, together with an account of track and weather conditions.

163. Referee.—The referee decides all questions relating to the actual conduct of events for which settlement is not provided in the rules. The referee shall appoint one judge at the finish, Head Judge; one of the field judges, Head Field judge, and one of the timers, Head Timer.

164. Inspectors.—Inspectors perform duties assigned them by the referee relative to violation of rules.

165. Scorer.—The scorer keeps a record of the starters and point winners, together with their respective courses and complete results. He records the laps made by each competitor and calls them aloud when tallied for the benefit of the contestants. He notifies the starters before the beginning of the last lap in each distance race, at which time a signal by bell or pistol shall be given the competitors.

166. Clerk of Course.—This official is responsible for getting the competitors of each event out at the proper time. He places men in their heats, and gives them positions on the track according to their drawings.

167. Marshal.—It shall be the duty of the Marshal and his assistant to keep the ground and the track free from persons, except officials, contestants and those who may be granted permission by order of the Games Committee.

168. Surveyor.—Shortly before the meet the official Surveyor shall measure the track and all courses, take offs for the jumps and vaults, and present a written statement of the same to the Games Committee and Referee.

169. Press Steward.—This official obtains names of contestants, points of interest, etc., and keeps representatives of the press informed regarding the meet.

170. Starter.—The starter has entire control of the competitors at the marks, except as provided for the clerk of the course, and is the sole judge as to whether a man has gone over his mark. He is responsible for starting track events promptly and shall avoid delay. He gives a signal by pistol shot or bell at the beginning and last lap of each distance race.

171. Judges of the Finish.—Judges at the finish stand, two at one end of the tape and three at the other. One picks the winner, another the second man, and so on as the case may require. The judges pick one more than the number to score. Their decisions for the finish are without appeal.

172. Field Judge or Measurers.—The Head Judge: This official measures, weighs and inspects all implements and equipment, checks records, starts the meet on time, and aids the referee in keeping the proper relation between track and field events.

173. Junior Judges.—These officials measure, judge and record each trial of each competitor in all events, where record is of distance or height. They may excuse a contestant from a field event in which he is taking part long enough to take part in a track event.

174. Time Keepers.—There are three time keepers for each track event. In case two watches agree, the third disagrees, the time marked by the two shall be official time. If all watches disagree, the time marked by the watch giving the middle time shall be the official time. Time is taken from the flash of the pistol. Three watches must record the time on an event for a record.

COACHING TRACK AND FIELD

175. Equipment for Sprinter.—Light running shoes with six spikes in the sole, arranged three on each side, a pair of light material running trunks, loose in the leg to allow freedom, and a sleeveless jersey will answer for equipment.

176. Equipment for Jumpers and Hurdlers.—The jumper's and hurdler's shoes are somewhat heavier than the sprinter's shoes and have two additional spikes in the heel to prevent slipping. Some hurdlers prefer

only one spike in the heel, claiming that there is less danger of knocking down a hurdle.

177. Weight Men.—Weight men can use a jumping shoe with high uppers. Their work calls for considerable turning and pivoting which is quite a strain on the ankle joints. The upper acts as an ankle supporter and often prevents injury.

178. Equipment for Indoor Work.—For this work rubber soled "sneakers" are very practical. There is also an indoor running shoe, which has rubber covered soles with needle spikes about 1/4 of an inch long. This shoe can be used on a wood or linoleum track with good results.

179. Sprinters.—After some fall cross-country running and gymnasium work through the winter months the sprinter can start his spring training out-of-doors about the middle of March if weather permits. On cold days keep legs warm; wear a pair of woolen drawers.

180. Endurance of Sprinters.—The amount of work a sprinter can do depends on his individual makeup for there are no two sprinters alike. Some are stronger than others and can stand more work, while others must be satisfied with less work. A runner is usually in shape after about six weeks of outdoor training. When a man is in good shape he should not be overworked, but given just enough work to keep him on edge. Sometimes a runner will go stale, as a result of too much work, in which case it is often necessary to lay him off for a week or ten days in order to again get him back in shape.

181. Selecting Sprinters.—In some cases a runner may not make good in the sprints, but if given a chance may make good at some longer distance where there is not so much speed required, but more endurance. This is where the coach should use his judgment and give him a try at something else. Very often a fair sprinter will develop into a good running broad jumper. The sprinter is usually of stocky build with long legs and as a rule is gifted with a fair amount of speed.

182. Schedule for Sprinters.—For the average athlete after some preliminary training indoors:

Monday: 6 starts of about 30 yards, a fast sprint at 70 yards; run through an easy 220 yards.

Tuesday: Short starts; a fast 50 yards; a fast 80 yards; run through an easy 100 yards.

Wednesday: After some jogging and a few short starts, run through 120 yards at top speed.

Thursday: A few short starts, run through 30 yards at fair speed.

Friday: A light workout consisting of a few starts and some easy jogging.

Saturday: After some warming up run through the 100 and 220 yards for time with a rest between.

Always do some easy jogging to warm up before going to the mark for a race or starting the day's workout. As the season progresses increase the work.

183. 440 Yards.—The quarter mile can be classed as a sprint, although many of the track coaches do not agree on this point, and give it a place in the longer distances, but on the other hand judging from the record it should be placed in the same category with the sprints. A good quarter miler should be able to run the 100 yards in 10-1/5 seconds, and 220 yards in the neighborhood of 22 seconds. Frank Shea was the ideal quarter miler, he could do 10 seconds for the century and better than 22 seconds for the furlong. He was of stocky build with long legs and well developed chest. Of course, there are exceptions to the rule. Very often a long lanky man will develop into a good quarter miler, but very seldom a short man, as he is handicapped with his short stride and can not cover the ground that the taller man can.

184. Schedule for 440 Yards.—A good weekly schedule for the quarter miler after some preliminary work through the winter months is as follows:

Monday: If on circular track, a few starts around the first turn so as to become accustomed to getting away fast and getting the pole, which is a decided advantage in the quarter mile; go through an easy quarter in about 60 seconds; finish up with a good 300 yards.

Tuesday: A few starts of about 20 yards; run through 540 yards as follows, the first 440 yards at fair speed, the remaining 100 yards at full speed.

Wednesday: Run through 100 and 220 yards at full speed with a rest in between.

Thursday: A few starts: two easy quarters with a rest between.

Friday: A light workout with some easy jogging.

Saturday: Warm up and run a quarter for time.

The quarter miler should be coached to stretch out, long stride not exaggerated, and run in a straight line.

Faults: Feet turned outward instead of straight forward, raising heels too high in the rear, this can be termed lost motion, and has a tendency to slow a man up and cause him to lose his balance.

185. 880 Yards.—The half miler is a different type runner from the sprinter. His event calls for less speed but a wonderful amount of endurance and grit. A good half miler can run a quarter in about 51 seconds, which is not slow by any means. Some half milers run their first quarter slower than the second quarter. Some run both quarters at about the same

rate of speed, while others run their first quarter fast and the second a little slower. The half miler must be a good judge of pace, and be able to tell just how fast he is running his quarter without the aid of a watch. Very often a decoy runner is put in a race to pull out a good runner. Make him run faster than he ordinarily runs his first quarter. If he is not a good judge of pace, he is very apt to run too fast and be "licked" off in the first quarter, and not be able to finish as he would if he ran his usual quarter. On the other hand if the man who is accustomed to running his first quarter fast, is paced by a slow man, he is liable to be fooled and will not be able to finish in good style. This is all the more reason for the half miler to be a good judge of pace and be able to tell within a second just how fast he is running his quarters.

186. Types of Half Milers.—There are various types of half milers, some are tall of medium build, while others are of medium height, some are small men, but they must all possess endurance and grit otherwise they will be of little use. Earl Eby might be mentioned as one of the small type half milers. He has a record of one minute and fifty-four seconds to his credit, a remarkable performance for a short man. There is no set rule as to build for a coach to pick his men for this event.

187. 880 Yard Schedule.—

Monday: Run 3/4 of a mile at fair speed.
Tuesday: Two easy quarters with a rest between quarters.
Wednesday: A fair half mile.
Thursday: Some short sprints, some jogging and 220 yards at full speed.
Friday: Light workout, some easy jogging.
Saturday: Run through the half mile for time.

188. One Mile Run.—The miler must possess a wonderful amount of endurance, grit, and staying power. He should do plenty of cross-country running in the fall of the year, and gymnasium work in the winter months when the weather does not permit running outdoors. This cross-country running and gymnasium work will get him in good shape for the outdoor season in the coming spring. He must be a good judge of pace, even more so than the half miler as his event calls for four quarters instead of two. The decoy runner must be watched in this event as in the half, if the pace is too fast for him and he follows the pace he is liable to be deceived as the half miler. If he is a good judge of pace he will be able to tell if he is running too slow or too fast, and will get out and set his own pace. The good miler always runs his own pace.

189. Types of Milers.—As in the half there is no set rule as to what type of man to pick for the mile. The small man has the same chance

that the medium and tall man has, providing he can develop the necessary endurance and stamina. "Joie" Ray is a man of small stature and has some remarkable performances to his credit. "Eddie" Curtis of the Navy is built just the opposite, tall and rangy, and can do it in four minutes and twenty seconds. The miler can not expect to make good his first year, or his second, as a rule the third year is the best.

190. Schedule for Milers.—

Monday: Run an easy mile and a half.

Tuesday: Run a fair three-quarter mile.

Wednesday: Three quarters, with a rest between quarters. These quarters to be about 60 seconds.

Thursday: Easy one and one-quarter miles.

Friday: Some easy jogging.

Saturday: Run through the mile for time.

The miler should do some sprinting which is very necessary for his finish. He should develop an easy style of running, not raising the knees too high in front and the heels too high in the rear.

191. Hurdle Racing.—This is a combination of sprinting and jumping, is a very interesting event at the track meet. The successful hurdler must possess both speed and spring, as these are essential. The long legged man has the advantage over the man with short legs, being able to clear a hurdle with less effort and more ease. The hurdler starts as the sprinter with the crouching start. He must be running at almost top speed when he clears the first hurdle; otherwise, he will slow up and not have the necessary momentum to carry him through the full flight.

192. Method of Hurdling.—In the old style of hurdling the hurdler would draw his knee up in front of the body (float) and straighten it out again just before taking the next stride. This required too much movement of the legs, and would slow a man up. The present day hurdler does not bend his knee as much and just slides over; consequently he does not float as long as the old style hurdler, and gets back to his natural stride quicker.

193. Distances.—The length of the high hurdle race is 120 yards. From the starting mark to the first hurdle is 15 yards, the distance between hurdles is 10 yards, from the last hurdle to the finish line is 15 yards. All coaches agree on three strides between hurdles in the high hurdle race. The hurdles are three feet and six inches high.

194. Low Hurdles.—In the low hurdle race spring is not as essential as in the high hurdle since the hurdler merely strides over the hurdle just clearing it enough to get over and not losing any time in getting back to his stride. The successful low hurdler takes seven strides between hurdles.

Some hurdlers are short limbed and have quite a task in trying to make it in seven strides, and are obliged to take eight strides. This necessitates changing the jumping foot, clearing one hurdle from the left (r) foot and the next one from the right (l) foot and so on.

195. Distances.—The length of a low hurdle race is 220 yards, from the starting mark to the first hurdle is 20 yards, the distance between hurdles is 20 yards, from the last hurdle to the finish is 20 yards. A low hurdle is two feet and six inches high.

196. Form of Exercises for Hurdlers.—A good form of exercise for a hurdler to practice in the gymnasium during the winter months is high jumping at low heights, high kicking; stand on the leg which goes over the hurdle first and raise the other leg backward turning the foot outward and keeping the body erect; stand on the leg which goes over the hurdle last, and raise the other leg up on front of the body keeping it almost straight; place a hurdle on a mat and practice clearing it for form.

197. Hurdle Schedule.—

Monday: Run over four flights about six times with some easy sprinting.

Tuesday: Six starts over first hurdle at full speed, run over six flights two times.

Wednesday: Twice over full flight for form with a rest between.

Thursday: Run over five flights three times, 120 yards on the flat at full speed.

Friday: Light workout.

Saturday: Run over full flight for time.

198. Running High Jump.—In the running high jump the long legged man is again in evidence, and has the advantage over his opponent with short legs. The requirements for the high jumper are quite different from those of the runner, as speed is not so important as the ability to spring. The high jumper must be able to control his body in the air and be graceful in his movements. He cannot be awkward otherwise he will not be a top-notcher in this event. Form is quite a factor in the high jump and should be practiced at low heights until mastered. There are several different styles of high jumping. The ones most ordinarily practiced are the straight run and twist inward, the side run and scissors, and the one known as the "roll over." The style with the straight run and twist is probably the best. Most of the successful high jumpers use this style which is more or less the adopted style throughout the country.

199. Form for Running High Jump.—The jumper runs straight at the bar, springs and shoots legs up over the bar, and then quickly twists the body inward, so that he is turned face downward and almost in a horizontal position, and lighting in the opposite direction from where he started from.

If the scissor jumper can master this style he can easily increase his jump four inches. The arms are also very important in the high jump. If the jumper does not get the proper co-ordination of arms and legs he will be at a loss and will not get the results he would if he had these assets. It is necessary for the high jumper to have two marks, the first one where he starts his run, and the second one about four or six strides from the take-off. This second mark he should hit with his jumping foot (the foot he springs from).

200. Jumping Exercises.—For practicing in gymnasium: High kick: walking on the toes; hopping on the jumping foot; alternately raising the knees in front of the body; easy high jumping for form, care to be exercised not to overdo this as indoor jumping on a hard floor is not the best thing for heels and ankles, there being considerable strain on the ankles and danger of bruising the heels.

201. Jumping Practice.—After getting out of doors the jumper can get in some real work. It is not a good plan to jump every day and see how high you can go; once a week is enough to try for height, on other days some easy sprinting and jumping over low heights for form will be sufficient.

202. Running Broad Jump.—There are two important factors in the running broad jump; speed and spring. Some broad jumpers depend on their spring while others depend on their speed. The successful broad jumper is the one who possesses both qualities and has the ability to combine the two.

203. Form.—The take-off is the next thing to be considered. Unless the broad jumper has a good take-off he can not expect to make a good jump. Two marks are necessary, the first one about 100 feet from the take-off and the second one about 50 feet from the take-off. He should hit the second mark at top speed and continue to the take-off. Hit it fair without stepping over. Then, with all possible effort, spring, and drawing the knees up in front of the body, shoot them forward just before landing. It is very important to get high in the air, and use the arms to advantage. The broad jumper may find it necessary to move his second mark one way or the other, this of course depends on the length of his stride and may be obtained by constant practice. The broad jumper has a tendency to reach for the take-off on his last stride. By doing this he will not get the proper height and will lose his momentum, falling backward instead of forward. The last stride should be shorter in order to get the necessary lift. He must learn to run with an even stride. He must consider the wind and a heavy running path, which will shorten his stride. On these days he will most likely find it necessary to change his marks.

204. Practice.—It is not a good practice to jump every day, as this is one of the easiest events on the program to go "stale" in. Two or three days a week are enough for actual jumping and once a week for distance. On other days short sprints of 30 yards and running up to the take-off will be sufficient. Too much actual jumping is bad for the arches, heels, and ankles. Work indoors is very much limited on account of facilities, etc.

205. Pole Vault.—The pole vault is the most spectacular field event on the program. This event takes about twice as long to run off as any other event, and should be the first field event on the program. The pole vaulter is usually well developed in the upper body, has big shoulders, arms and chest very much like a gymnast and applying his muscular effort in the same way. He must be able to handle his weight and have control of his body while hanging on the pole in mid-air. The vaulter clearing the bar at 13 feet, which is not unusual for the present day, has quite a drop under him to the pit where he expects to land feet first. Without the proper control he is very apt to land in a faulty position, and receive an injury. He must possess a fair amount of speed and be able to run an even stride with good form.

206. Form for Pole Vault.—As in the other jumping events the pole vaulter should have two marks, one about 100 feet from the take-off and the other about 30 feet from the take-off. The modern style of vaulting is quite an improvement over the old method, where the vaulter did not shift his hand, but kept the stationary grasps. In the new style of vaulting the lower hand is shifted upward to the upper hand as the pole is planted, the advantage being a better pull-up with the arms and a lower grip with the top hand.

207. Vaulting Pole.—The best pole is the 16 foot bamboo pole with a blunt wooden peg at the lower end. It is lighter than other poles, and easier to handle, and will not break so readily. The vaulter should take care of his pole, not leaving it out in the weather, and carrying it indoors after each practice.

208. Practice for Pole Vault.—The pole vaulter very often makes that serious mistake of trying for height at every practice. By doing this he loses his form and wears himself out, and as a rule he does not progress the way he would if he did less vaulting for height and more sprinting and vaulting at lower heights for form. During the winter months in the gymnasium he should take pains to develop his arms and chest. Rope climbing and bar vaulting are good exercises to develop the arms, and will give the vaulter the necessary co-ordination for handling his weight. Some other exercises which will prove beneficial are chins on horizontal

bar, dips on parallel bars, and vaulting over an obstacle from a swinging rope with a short run. All-around apparatus work is very beneficial.

209. Shot Put.—The ideal shot putter is usually tall and well developed, with plenty of weight to follow up the shot. The medium built man although well developed will never become a top notcher in this event as he is at a disadvantage by not having the necessary weight. Besides the physique there are other things to be considered: strength, speed, and snap. He must be able to get across the ring quickly, and twist his body with a snap just before letting go of the shot. This latter movement requires good co-ördination of the shoulder, trunk, and leg muscles. The snap or twist can be best developed by putting from a stand without the skip. This enables him to put more emphasis on the turn and twist, and teaches him to get the "final kick" just before letting go of the shot, when he should make his greatest effort. At the finish of the put the trunk should be in an upright position, slightly inclined forward, and in line with the legs. A common fault is to bend the trunk forward and reach forward, instead of slanting upward. From this position the shot will go straight out from the shoulder, instead of slanting upward and the proper elevation is not obtained.

210. Practice for Shot Put.—The shot putter has quite an advantage over the other weight men. He can practice indoors in the winter months with the indoor shot. When getting out of doors he can practice three days a week for distance. On other days he should devote his time to standing puts and do a little sprinting. Sprinting will give him the necessary speed and keep him from slowing up. In the gymnasium he should take exercises that will develop his arms, shoulders, and back. Boxing, wrestling, and hand ball are good exercises.

211. Discus Throw.—The discus thrower is tall and rangy, with long arms and big hands. The long arm gives him a better leverage and the big hand affords a firm grasp on the discus which enables him to get a better pull on the discus as the arm is coming forward. The single turn is the one most used by athletes. The double turn is not very popular.

212. Form for Discus Throw.—The last part of the turn is somewhat similar to that of the shot put, and should be executed with the same snap. Probably the hardest thing to overcome in this event is to keep the discus from flopping. This is caused by turning the hand as the discus is released. The discus should sail through the air without much quiver, giving it less air resistance. At the revival of the Olympic Games the Greeks were very strong in this event. Their style was to throw it from a pedestal, but the style now in vogue is called the free style, in which the discus is thrown from a circle 8 feet 2 and 1/2 inches in diameter, with a

single turn. The late Martin Sheridan was the ideal type of discus thrower. His throws averaged from 130 feet to 140 feet. One of the most common faults is to let the discus get ahead of the body while making the turn, and raising the feet too high from the ground. The discus thrower should develop his arm, trunk, shoulder and back muscles. All-around gymnasium work, such as boxing, wrestling, hand ball, etc., are beneficial, and get him in shape for the outdoor season. If space permits in the gymnasium he can throw the indoor discus, but as a rule most gymnasiums are too small for this form of exercise. Throwing for distance on every other day is sufficient. On other days practice throwing from a stand, and do some sprinting.

213. Javelin Throw.—The javelin is practically a new event in this country, and is adapted to the small man as well as to the large man. The requirements of the javelin do not call for strength as much as they do for form. In the 1920 Olympic Games the Finns and Swedes threw the javelin well over 200 feet, while our own athletes could not reach the 200 mark. They were not large men by any means, rather of medium build instead. Their form was different from that used by our athletes. They carried the javelin above the shoulder with the point directed slightly downward, running with a fair amount of speed and swaying to the side just before hitting the take-off, getting something in their arm and shoulder movement which so far our own athletes have not mastered. The American javelin throwers will no doubt benefit from their experience at the 1920 Olympic Games. The javelin is thrown with unlimited run, without follow, the length of run being about 20 yards. The indoor training should consist of all-around gymnasium work, such as rope climbing, apparatus work, light wrestling and boxing, and throwing the baseball. Throwing a baseball is somewhat similar to throwing the javelin, the same muscles being employed. Throwing for distance three days a week is sufficient. On other days practice sprinting, and getting the take-off.

214. History.—The first records for Track and Field at the Naval Academy are for 1892. The earliest records are:

1892	100-yard dash 11 sec.	1896	220-yard Hurdle 30 2/5 sec.
1892	220-yard dash 25 1/5 sec.	1892	High Jump 5 feet.
1892	440-yard run 60 sec.	1892	Broad Jump 18 ft. 4 in.
1892	Half-mile run 2 min. 19 3/5 sec.	1892	Shot Put 32 ft., 1 in.
		1892	Hammer Throw 81 ft. 1 in.
1907	2 mile run 10 min., 19 sec.	1892	Pole Vault 9 ft.
1892	120-yard hurdle 19 1/5 sec.		

215. Government of Track.—Track and Field is the fourth major sport at the Naval Academy. Track meets in which the Academy takes

part are governed by the National Collegiate Athletic Association, and the Intercollegiate Association of Amateur Athletics of America, which is a member of the N. C. A. A.

216. College Meets.—Colleges throughout the country hold meets under the following organizations:

*Annual Track and Field Meet, N. C. A. A.
Annual Field Meets, I. C. A. A. A. A.
Cross-Country Championships, I. C. A. A. A. A.
Annual Outdoor Meet Intercollegiate Conference.
Annual Indoor Intercollegiate Conference Meet.
New England Intercollegiate A. A. Track & Field Meet.
New England Intercollegiate Cross-Country.
Southern Intercollegiate Athletic Association.
Missouri Valley Conference Track & Field Meet.
Rocky Mountain Conference Meet.
Pacific Coast Conference Meets.
Virginia Intercollegiate Athletic Association Meets.
Drake University Relays.
University of Pennsylvania Relays.

*(First meet in 1921, winners of various conferences competing.)

217. Records.—Definitions of records made at athletic meets are as follows:

An Intercollegiate record is any record acceptable to the Association made at an annual field meeting of the I . C. A. A. A. A.

An All-American college record is a record made by an eligible student at any college meet.

A college record of the United States is any record made by an eligible student of a member of the Association acceptable to the I. C. A. A. A. A. and at any field meet held by a member of the I. C. A. A. A. A. and under its rules.

218. Naval Academy Record.—This is a record made at any regularly scheduled meet with any college under the rules of the I. C. A. A. A. A.

219. Selection of Team.—Members of track squad are selected from actual trials in competition at the opening of the season, or from results in class meets.

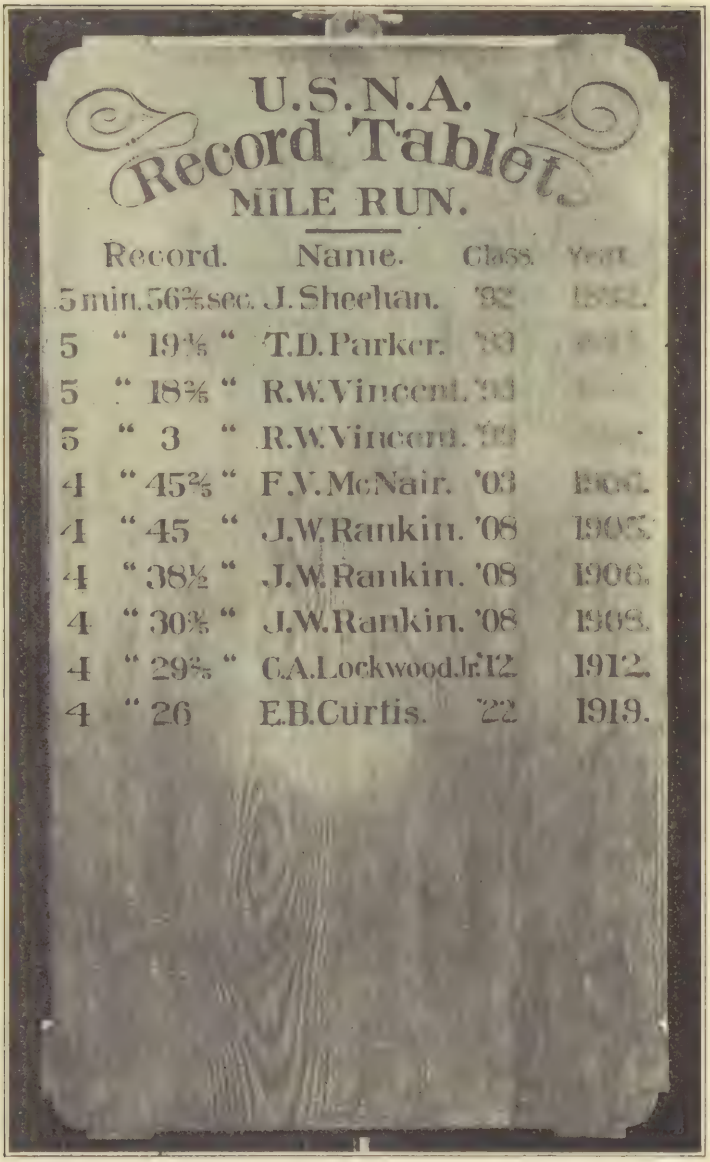

FIG. 84. Naval Academy Record Tablet

220. Events for Meet in Order.—

TRACK

1. 100 yards run,
2. 120 yards hurdle,
3. One mile,
4. 440 yards run,
5. 120 yards hurdle,
6. Two mile run,
7. 220 yards hurdle,
8. One half-mile run.

FIELD

1. Putting the shot,
2. Pole vaulting,
3. Running high jump,
4. Throwing the hammer,
5. Running broad jump.

TRACK IN GENERAL

221. Construction of a Track.—A quarter mile track is generally constructed around a football field. The track should be measured 12 inches from the curb or pole. Cinder tracks are the most satisfactory. It is possible to use a cinder path in wet weather and it is easily kept in condition and is as fast as a dirt track. Provision should be made for 220 yards straight away or for running the low hurdles and 220 yard dash around the curve. Some very good tracks have been constructed that are not wider than 15 feet on the ends and back stretch, and 24 feet on the straight away. It is suggested that tracks should be 30 feet wide on the straight-away and 24 feet wide elsewhere.

BASKETBALL

BASKETBALL

BY J. N. WILSON

Instructor in Basketball, U. S. Naval Academy

TEST "C"

Note: Rules to satisfaction of instructor.

223. Catching the Ball.—In catching the ball the hands should be in a funnel shaped position with fingers spread allowing the ball to wedge into the palms of the hands and fingers, held there by finger pressure. The hands should not be held rigid but should give slightly when the ball comes in contact with the hands. The fingers are pointed up or down in catching the ball and not pointed directly toward the ball.

FIG. 85. Position of hands in catching ball above the waist

FIG. 86. Position of hands in catching ball below waist

224. The Under Hand Pass.—This can be made with either hand, or both hands, and is very effective for short passing. In one hand passing the ball rests on the hand with fingers spread and is passed to a team mate

by a free swing of the arm. When passed with two hands it is held below the waist and passed by a raising of the forearm and a snap of the wrist.

225. Push Pass.—The push pass is made from several positions and is used whenever possible, since the ball can be passed to a team mate quickly with extreme accuracy and good speed. The ball is held in both hands with thumbs toward body and is passed to a team mate by pushing the ball away with the wrists and forearms mainly.

226. Hook Pass.—Hook pass is held in one hand with fingers spread holding it against the wrist. The body is turned sideways being between the opponent and ball. The pass is made by bringing the arm over the head as high as possible and snapping the ball away with a quick forward motion of the wrist and forearm.

FIG. 87. Push Shot from any Position

FIG. 88. Under-hand Hook Pass

227. Bounce Pass.—The bounce pass is used when an opponent is between you and a team mate. The bounce pass is made by pushing the ball to the floor with one or both hands near the opponent's feet, causing it to bounce to a team mate. It is very effective when closely guarded out of bounds.

FIG. 89. Bounce Pass

228. Passing in General.—Good passing is absolutely necessary in order to have a winning team. Shots at the basket come only after good passing. Bad passing disorganizes team work. The passer must have a mental picture of the position of his team mates, keep his eye on the ball in catching, make an accurate pass and uncover for a return pass. Passes must be made in front of a moving team mate and should be kept above the waist as any stopping to handle a pass prevents fast moving.

229. Goal Throwing in General.—Goal throwing is beyond a doubt the most important factor in winning basketball games and an unusual amount of time is necessary to develop the correct form in shooting. There are certain fundamentals that must be observed. Position of the body at take-off, position of arms as ball leaves hands, position of legs in landing. Close up shots should be made by leaping as high as possible into the air and making it possible to almost lay the ball to the desired spot.

230. Long Bank Shots.—On outside bank shots the ball is held in two hands and pushed toward the board with a twist or English given by passing the hands under the ball as it leaves the hands. The bank is used and a spot on the board must be a target and hit, causing the ball to drop or cut down through the basket.

FIG. 90. Two Arm Pass from Side

FIG. 91. Over-hand Pass

FIG. 92. Height and Position of Hand in Dribble

FIG. 93. Start of Under-hand Shot from Foul Line

FIG. 94. Finish of Under-hand Shot from Foul Line

FIG. 95. Beginning Push Shot from Foul Line

FIG. 96. Finish of Push Shot from Foul Line

231. Push or Loop Shot.—The ball is held in both hands, fingers spread with thumbs toward body. The shot is made by pushing the ball high over head with enough forward motion to carry it just over the forward edge of the basket. No bank is used and no English is necessary. The ball leaves the hands by separating them at the point when they are extended. The legs and body are bent slightly with one foot in front of the other when shot is started, but as shot is completed the body and legs straightening and slight spring from the floor results.

232. Short Bank Shot.—Bank shots are made with either one or both hands depending upon the position on the floor. On close up bank shots the ball is held on one hand with fingers spread and arm extended toward the basket. Leap high into the air, turning the body so as to keep the basket in view at all times. The eye should be kept on the spot of the board you desire to hit and place the ball against it easy, so as to drop through the basket after hitting the board.

FIG. 97. Toss-up at Center

TEST "B"

233. Stops.—Stops are used by a player on offense at end of a dribble or player receiving the ball or for the purpose of getting rid of a guard so as to permit the man on offense to receive pass. Slowing up or making a half circle to stop will not deceive a good guard, for the reason that he can judge the opponent's speed, but if a player is running fast and suddenly stops the guard will go on by because he is not able to anticipate the moves his man will make. When a runner closely guarded by an opponent makes a good stop the guard will often try to hold and thus commits a foul.

234. Form for Stop.—Slap the feet down flat on the floor. Both feet should strike the floor at the same time, either foot slightly in front, knees apart.

235. Turns.—A turn is made either after a stop or from a standing position on the court. When a player has possession of the ball he may feint to go in one direction and then turn in the opposite direction, turning his back to an opponent. From this position the player may pass or dribble. Turns are especially good when an opponent charges the player with the ball. A charging guard is easily eluded unless he fouls, therefore a team which uses stops and turns should have officials who will watch for fouls.

FIG. 98. Position for Guard on Toss-up at Center

236. Pivots.—Pivots are only used by the man with the ball while turns are used by all. In pivoting a player may raise the same foot any number of times so long as he holds the pivot foot on the floor of the court. All movements in the pivot must be decisive.

Note: Play Formations and Signals to Satisfaction of Instructor.

TEST "A"

OFFICIATING

BY ASST. PROF. HENRY F. STURDY

U. S. Naval Academy, Member of Advisory Committee on Basketball, of the National Collegiate Athletic Association.

237. Training for Officiating.—There is no more important part in basketball than that played by the officials and a part toward constructive development of which so little has been done, though certain people have undertaken to perform the duties of the official, how many have done more than to learn the rules and put themselves in good physical condition? If the men fascinated by the art of officiating—and there is a certain fascination—would really try to train themselves to supervise basketball games, the game itself would be greatly enhanced both in value and in interest.

238. Natural Qualities.—But of what should the training consist? The answer to this must be determined not only by the duties incumbent upon the officials but also by personal qualifications that an official should possess. The training should be determined, then, not only by the rules, but also by the indispensable mental poise and balance so necessary for the proper control of a game.

239. Knowledge of Rules.—First of all, then, an official must know the rules from cover to cover, their meaning and their bearing upon the real purpose of the game. It is this relation of the rules to the spirit of the game that is so much neglected; and it is this neglect in the last analysis, that is the cause, in most instances, of dissension between teams and that is more often the cause of rough tactics and other rule violations. Let the official, then, learn the rules. He should have them at his finger tips, so that he can apply each one instantly with an intelligent explanation of its exact meaning and force. He should not only know a rule and its interpretation, but also its place in the rule book, which should be in his possession at every game.

240. Drill as an Official.—The mere acquisition of the rules, however, is of no value if they are not carried out. The rehearsal, then, of the rule administration should follow, at once, after learning the rules. Rehearse, until entirely conversant with the rule requirements, every detail of game control. Assume that you are actually running a game and go through each duty of the official. Suppose that you are to act as a referee. What would you have to do? The first thing would be to be sure that neither team is practicing with the new ball if a new one is to be used. If a new

one is not to be used, then see that the visiting team is given for its practice the used ball which has been selected by them from the two balls accepted by the referee. Next, see that the scorers have the proper lineup and the required signal instruments; the timers understand thoroughly the duties they must perform. Then check the court, the baskets, and boundary conditions for any irregularities. After that, start an imaginary game by practicing throwing up the ball just beyond the reach of your centers, blowing your whistle when the ball has reached its highest point. Next, go through the application of your foul rules by calling out some foul violation, clearly indicating both the nature of the foul and the offender, so that both scorers and audience can understand your decision. After acquiring proficiency in foul indication, rehearse out of bounds ball awards by practicing with a watch the five seconds-counts that should be called out loud when a ball is given out of bounds to a player. Then practice putting the ball on the free throw line, and counting ten seconds to yourself —never aloud—for a free foul throw.

241. Rules of Play.—This much one can do without teams actually present, but for the rest a practice game is necessary. The rest of the game administration, as provided by the rules, is closely interwoven with what may be designated as the official's technique, which may be described as the correct method not only of carrying out the rules but also the spirit of the game. This technique, which, if correctly applied, assists greatly in the referee's control of the situation, is inseparably linked with that desirable mental poise and balance so essential for effective game administration.

242. Information to Players.—Before the game begins, call all the players together and tell them what is going to be the principle of your game administration, explaining any rule changes, demonstrating foul tendencies, and warning that no one but the captain is allowed to address an official—and even the captain cannot argue. Nothing is more effective than to let the players know that you are watching for certain foul violations. The umpire, too, should be consulted as to the desirable out-of-bounds assistance and warned that he must not award the ball, however, or put it in play, under any condition whatsoever. He has nothing to do with the control of the play, but is there primarily to stop rule violation by the individual players. He may call fouls on any player and should do so even though the referee, who seems, apparently, to be watching the play more closely than he, has failed to do so. Be sure to ask each captain whether his team is ready before you signal for the game to begin, and this should be done after the game's normal progress has been interrupted. The officials' decisions should be made quickly and with force, but without the slightest tone of irritation or annoyance. This is, perhaps, the most essen-

tial qualification for an official—a manner unruffled, yet firm, courteous yet inflexible, equable yet forceful.

243. Mental Attitude.—Of all the personal requisites, the official's manner should receive the greatest care in its development. It is this mental attitude toward the players that begets confidence and respect and that changes rough tactics into well ordered play. The true spirit of the game and the true spirit of athletic competition are dependent more upon this than is generally realized. It is a display of the best form of leadership when found developed in its highest form. Such things, though seemingly trivial, tend to strengthen your game-control, which will then be never for one moment out of your hands. Remember that the officials must keep out of the play as well as follow the ball. Both are essential and neither must be neglected. Never stand between the play and the basket. Do not stand, then, between the jump players and the basket when throwing up a held ball. Do not stand on the inside of the jump players when throwing up a held ball near the boundary line. Try to keep out of the play when throwing up the ball at the center. Remember that you must keep the players under your control at all times. See, therefore, that both teams are watched when time is taken out. Do not let them wander off the court, or talk to substitutes or coaches, without an official around. A lapse of this kind indicates a looseness of game control.

244. Fouls.—When calling fouls, do not be afraid to call loud enough for everyone to hear. The audience is as much interested as the players and the scorers. Be sure to tell what the foul is for. This information keeps the audience in touch with the progress of the game and impresses the players with your rôle enforcement. Indicate clearly whether the foul is personal or technical; unmistakably point out the offender, if possible, both name and number, and see whether or not the scorers have all the necessary details. After a free throw award do not let a player place the ball on the free throw line, but you yourself place it there before the try is permitted to be made.

245. Substitution.—When a substitution is made, be sure that the player has reported to the scorers and announce the substitution to the audience. The official who thus checks every detail even to the point of being spilled on the court, and who sees that the game is played under the best possible conditions, is the official who has a comprehensive grasp of the entire situation, who appreciates the spirit of the game, and who keeps athletics on the best ethical plane. The officials themselves should notify the teams three minutes before the intermission end. He who does this and who applies the rules fearlessly with an even tenor, uninfluenced by the remarks or jeers of audience or participants, is the ideal official.

It is he who always administers the rules in the true spirit of the game, unaffected by a plea for less strict enforcement of the rules, unmoved by the crowd's disapproval of repeated penalties. As soon as the players find that the officials are absolutely determined to live up to the ideals of the game, they will begin to play fair and remove the real cause for the jeers.

BASKETBALL IN GENERAL

246. Basketball at Naval Academy.—Basketball ranks as the first minor sport. It was organized as a college sport in 1907, and the first game was with Corcoran Cadets, which the navy won 58 to 12.

247. Intercollegiate Organization and History.—Basketball as played in colleges is under the direction of the National Collegiate Athletic Association. The Eastern Intercollegiate League controls the larger colleges of the East. College basketball was organized in 1901, the chief trophy being the HEPPE CUP. In addition to the Eastern Association, basketball is conducted under the following organizations—

Western Intercollegiate Conference.
Missouri Valley Conference.
Pacific Coast and Northwest Conference.
Southern Intercollegiate Athletic Association.
South Atlantic Intercollegiate Athletic Association.

SWIMMING

SWIMMING

BY H. ORTLAND JR.

Swimming Coach, U. S. Naval Academy. Coach to Navy Olympic Swimming Team, Olympic Games, 1920

248. Back Stroke.—Starting position, "lying" (Fig. 99).

ARM MOVEMENTS

This stroke has three distinct movements:

First Movement: On the command *Up*, draw the fingers along the side of the body, bending the elbows, until the fingers reach the shoulders, elbows pushed well back. The upper arms at right angles with the body (Fig. 99).

Second Movement: On the command *Out*, straighten the arms out horizontally from the shoulders, palms of hands turned to the side of the body. (Fig. 100.)

Third Movement: On the command *Together*, bring the arms straight to the side of the body. (Fig. 101.)

FIG. 99. Back Stroke, First Movement

FIG. 100. Back Stroke, Second Movement

LEG MOVEMENTS

Leg movement is known as the "Frog Kick."

First Movement: On the command *Up*, draw the feet up under the body, keeping the heels together with the toes and knees turned out. (Fig. 99.)

Second Movement: On the command *Out*, spread the legs and straighten the knees. (Fig. 100.)

Third Movement: On the command *Together*, kick the legs straight together. (Fig. 101.)

FIG. 101. Back Stroke, Starting Position, Third Movement

COMBINATION OF ARM AND LEG MOVEMENTS

First Movement: On the command *Up*, combine the movements of the arms and legs as described under First Movement above. (Fig. 99.)

Second Movement: On the command *Out*, combine the arms and legs as described under second movement. (Fig. 100.)

Third Movement: On the command *Together*, combine the arms and legs as described under Third Movement. (Fig. 101.)

FIG. 102. Breast Stroke, First Movement

Movements may be executed by numbers.

While swimming the Back Stroke the head must be kept in line with the body, chest and stomach forced high and the breath taken through the mouth.

A more powerful Back Stroke can be acquired by beginning the arm sweep higher than the shoulder line.

249. Breast Stroke.—Starting position, "Reach Standing" (with palms turned down and outward). (Fig. 105.)

ARM MOVEMENTS

First Movement: On the command *Around*, pull the arms around on line with the shoulders. (Fig. 102.)

Second Movement: On the command *Up*, bring the palms together in front of the chest. (Fig. 103.)

Third Movement: On the command *Out*, extend the arms forward, palms together. (Fig. 104.)

Fourth Movement: On the command *Together*, turn the palms down and outward. (Fig. 105.)

LEG MOVEMENTS

First Movement: On the command *Around*, keep the legs extended in straight line with the body. (Fig. 102.)

Second Movement: On the command *Up*, draw legs up under the body (spread the knees), toes out, heels together. (Fig. 103.)

Third Movement: On the command *Out*, spread the legs (straightening the knees), toes well pointed. (Fig. 104.)

Fourth Movement: On the command *Together*, kick the legs together. (Fig. 105.)

FIG. 103. Breast Stroke, Second Movement

COMBINATION OF ARM AND LEG MOVEMENTS

First Movement: On the command *Around*, combine the movements of arms and legs as described under First Movement. (Fig. 102.)

Second Movement: On the command *Up*, combine the movements of the arms and legs as described under Second Movement. (Fig. 103.)

Third Movement: On the command *Out*, combine the movements of the arms and legs as described under Third Movement. (Fig. 104.)

Fourth Movement: On the command *Together*, combine the movements of the arms and legs as described under Fourth Movement. (Fig. 105.)

FIG. 104. Breast Stroke, Third Movement

Hold on to the rail or other support, while practicing the Leg Kick.
With the legs rigid, face submerged, practice the arm movement.
Practice the combination, face submerged, to gain confidence.

FIG. 105. Breast Stroke, Starting Position Fourth Movement

250. Side Stroke.—Starting Position, "Lying on Left Side." (Fig. 108.)

ARM MOVEMENTS

First Movement: On the command *Up*, turn the palm of the right hand to the water, elbow close to the side and left arm at the elbow drawn in close to the side. (Fig. 106.)

Second Movement: On the command *Out*, straighten the right arm, pushing the hand across in front of the face. Left arm as above. (Fig. 107.)

Third Movement: On the command *Around*, pull the right arm around close to the surface of the water till it touches the side of the body. Extend the left arm forward. (Fig. 108.) Note.—The left arm merely guides the body.

LEG MOVEMENTS

First Movement: On the command *Up*, keep the knees together and bend legs at the knees. (Fig. 106.)

FIG. 106. Side Stroke, First Movement

FIG. 107. Side Stroke, Second Movement

FIG. 108. Side Stroke, Starting Position, Third Movement

Second Movement: On the command *Out*, bring the right leg back of the body and left forward. (Fig. 107.)

Third Movement: On the command *Together*, kick the legs together, toe of the right foot striking the heel of the left. (Fig. 108.)

Note: Description for swimming on right side is similar to that for the left side.

251. Trudgen Stroke.—Starting Position, "Forward Lying" (Right arm in front of the body close to the head, left arm alongside the body). (Fig. 109.)

LEG MOVEMENTS

The leg kick being the same as in the Breast Stroke (see page 151) the combination of arm and leg movement will be explained.

COMBINATION OF ARM AND LEG MOVEMENT

First Movement: Left arm close to the side, right arm extended. Legs drawn up under the body as in the Breast Stroke. (Fig. 109.)

FIG. 109. Trudgen Stroke, Starting Position, First Movement

Second Movement: Left arm starting forward, right arm back, legs spread. (Fig. 110.)

FIG. 110. Trudgen Stroke, Second Movement

FIG. 111. Trudgen Stroke, Third Movement

Third Movement: Left arm extended forward, right arm to the side, legs kick together. (Fig. 111.) With each arm stroke use a Breast Stroke Kick. Roll the body from side to side, inhaling to the right, exhaling to the left.

252. Crawl Stroke.—Starting position, Sitting "Leg Kick." (Fig. 115), Lying (Fig. 116).

ARM MOVEMENTS

Arms forward, half extended, palms downward, hands a foot apart, elbows higher than the wrists. (Fig. 112.) Bring the left arm downward

FIG. 112. Crawl Stroke, Starting Position, Arms

FIG. 113. Crawl Stroke, Arm Stroke, Second Movement

FIG. 114. Crawl Stroke, Arm Stroke, Third Movement

with a sweeping motion until it passes the left side. As the arm sweeps down the elbow straightens out. (Fig. 113.) Bend the left arm at the elbow, raise upward until above the water, elbow above the wrist, the arm relaxed. (Fig. 114.) Extend the left arm forward until it assumes its first position. The right arm is in the opposite position to the left. As the left is pulling through the water the right is being raised out from the side. As the right arm pulls down to the side the head is turned to that side to get the breath. Exhale on the left side, through the mouth and nose, forcibly.

LEG MOVEMENTS

The motion of the legs is continuous. It is customary to begin with six kicks to the arm stroke. The movement of the legs should be taken while seated on the edge of the pool, so that the legs will move freely from the hips, grasping the edge of the pool with the hands, legs extended forward at right angles to the trunk, toes pointed in, heels apart and knees straight. Raise the right leg 6 inches above the left, then reverse the position of the right and left legs with a snappy motion.

FIG. 115. Crawl Stroke, Position Practicing Leg Kick

This move is executed slowly at first; after this enter the water, assume "Balance Position" and gradually increase the speed of the kick. Toes pointed in to prevent bending of the knees too deeply. (Fig. 115.) Finish position for Crawl in Action.

253. Resuscitation of the Apparently Drowned.—(Shafer Method. This method is now the standard method of artificial respiration throughout the entire country. It has been demonstrated to be far superior to all

other mechanical or artificial methods which have been devised. In fact, if properly carried on, it is even more effective than habitual natural breathing.)

FIG. 116. Crawl Stroke, Position for Action

AS USED BY THE AMERICAN RED CROSS

A person in distress in the water should try to turn on his back in order to float in that position, or should seek for objects close at hand such as oars, logs, drift wood, etc.

A person apparently drowned is suffering not only from the suffocating effects of water, but, usually, from exhaustion caused by struggling, and shock from fright and cold, as well. They should be promptly and gently removed from the water and efforts at resuscitation should be begun instantly. If there are others present besides yourself send one man at

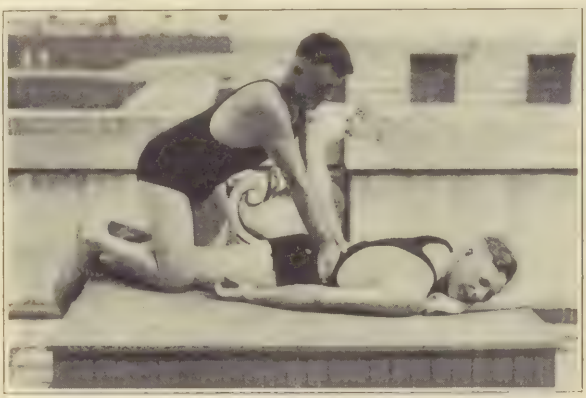

FIG. 117. Resuscitation, First Position

once for help—to get a doctor and bring blankets, etc. Keep someone to take turns with you in the laborious task of making the patient breathe.

To Restore Breathing: First Motion: Place the patient on the ground face down, with his face turned to the right, left cheek resting on the left hand; kneel across his body, so that your knees fall about even with the patient's knees.

Place the palms of your hands on the back of his chest, along the lower ribs, thumbs in; lean forward and gradually bring the weight of the body

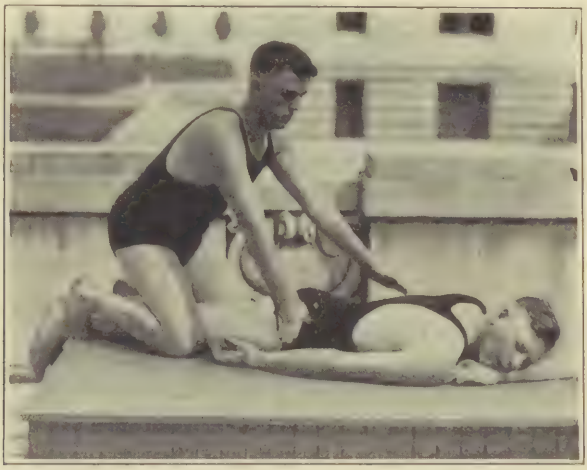

FIG. 118. Resuscitation, Second Position

FIG. 119. Resuscitation Finish

on the hands, thus forcing the air out of the lungs. In applying this pressure the arms should be straight and rigid.

Second Motion: Release the pressure quickly by allowing the palms to swing quickly out and away from the patient's chest. This sudden release allows the chest to expand and permits air to enter the lungs. The first phase of this motion should occupy 2 or 3 seconds before repeating; thus there will be about 12 respirations each minute. Imitation of natural breathing is the object. These efforts should be kept up for at least 2 hours, or until natural breathing is restored.

254. Approaching a Drowning Person.—Swimmers should attempt to get their attention, and assure them in a calm voice that they will be assisted provided they obey instructions.

BREAKS AND HOLDS WITH CARRIES

255. Wrist Hold.—(Fig. 120.) First Position: Drowning person having seized wrists. Second position: Note position of thumbs; turn and pull against thumbs. Third position: Seize extended arm and bring into cross-chest carry. Note: Head carry can be used.

FIG. 120. Wrist Hold

FIG. 121. Two Hands on One

256. Two Hands on One.—First position: Both hands have seized one of your wrists. Second position: Note position of thumbs; seize your own

arm and pull upward or downward against the thumb while straightening foot, which is placed in the pit of the stomach. Third position: Follow into carry as in Wrist Hold.

257. Front Neck Hold.—First position: Person has wrapped his arms around your neck. Position two: Place your right hand against person's right cheek. Left arm at victim's right elbow. Third position: Place pressure against cheek turning patient's face to left and raising at the elbow bringing into cross chest carry.

FIG. 122. Front Neck Hold, First Position

FIG. 123. Front Neck Hold, Second Position

258. Front Neck Hold, Leg Scissor Around Waist.—Victim has wrapped arms around your neck and legs around your waist. Second position: Use your thumbs in a circular motion in the floating ribs. Third position: Seize extended arm and bring into carry.

259. Back Neck Hold, Single Arm.—First position: Victim has one arm around your neck. Second position: Seize his wrist with nearest arm and grasp elbow with other arm. Third position: Turn his head in bringing his wrist down and raising up on elbow. Take any carry.

260. Back Neck Hold, Double Arm.—Positions are carried out as above, working for the one arm only.

FIG. 124. Front Neck Hold, Third Position

FIG. 125. Back Neck Hold, First Position

FIG. 126. Back Neck Hold, Second Position

FIG. 127. Back Neck Hold, with Scissor Around Waist

261. Back Neck Hold with Scissor Around Waist.—(When victim wears shoes) First position: Victim has wrapped arms and legs around you. Second position: Grasp foot and twist the ankle sharply outward. Third position: Turn and seize extended arm and bring into carry. (When victim wears no shoes) grasp foot taking hold of little toe with one hand and big toe with the other. Pull toes up and down. Execute carries as above.

262. Double Arm Hold.—First position: Victim has wrapped both arms around your arms. Second position: Raise up on your arms submerging at same time. Third position: On coming to surface seize extended arm to bring into carry.

263. Tired Swimmer's Carry.—Allow victim to place his hands on your shoulders, facing up. Swim forward using Breast Stroke. This is mainly used for exhausted swimmers.

FIG. 128. Double Arm Hold

FIG. 129. Tired Swimmer's Carry

264. Hair Carry.—Seize victim's hair tightly, with one hand, using opposite arm while swimming with Side Stroke. Do not pull with the hand that is holding hair.

FIG. 130. Hair Carry

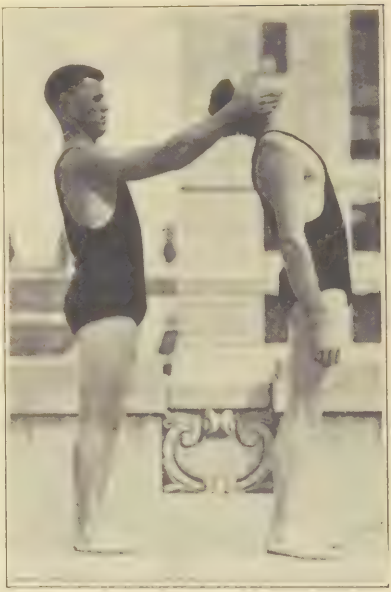

FIG. 131. Head Carry

FIG. 132. Cross Chest Carry

265. Head Carry.—Both hands covering ears extending hands downward to chin. Watch victim's face, keeping it from submerging. Swim on back, using Scissor Stroke kick.

266. Cross Chest Carry.—Arm across victim's chest well under the arm pit. Keep victim on your hips, using side stroke kick.

267. Two Point Carry.—Grasp upper arm, keeping elbow under victim's back. Swim on side, guiding victim's body by means of your elbow in his back.

COACHING SWIMMING

268. Training a Team.—Eat plain, wholesome food—chew thoroughly and vigorously, but do not overeat. Enter the competition with very little food to digest. Drink no water within three or four hours before the meet. Keep away from heavy sweets, tobacco and liquor. Take at least nine hours sleep.

The swimmer should not take a hot shower before entering the pool, but a vigorous rubdown with some well prepared soap solution, followed by a dry rub is very satisfactory. Hot showers sap the vitality and cause drowsiness. The important feature of training for a contest is distance swimming, which will strengthen the stroke, develop strength, improve the wind and give confidence in acquiring speed under conditions which call for the exertion of the least possible effort and for the conservation of energy. Distances such as the quarter mile, half mile, and mile should be covered twice a week. Sprints should be taken every other day, distances of 50 to 100 yards. Four 50 yard sprints or two 100 yard sprints together with about two starts taken in proper form and five turns should constitute a night's work. This schedule should be followed every second night.

It is also good practice to swim across the pool, using the legs only in order to develop the kick, with the face under the water coming up to breathe when necessary.

SWIMMING AS A SPORT

269. Swimming Associations.—All amateur swimming meets are likely to be held under one of the following organizations—

American Swimming Association,
composed of (Y. M. C. A.
(A. R. C.
(N. C. A. A.
Intercollegiate Swimming Association,
Amateur Athletic Federation,
A. A. U. (with district associations).

270. The Team.—(1) Captain: At the close of the swimming season, the members of the swimming team entitled to wear the "N" or letters, elect by a majority vote a captain for the ensuing year, subject to the approval of the Commandant of Midshipmen.

(2) Manager: Within two weeks after the beginning of the Academic year the second class shall elect one midshipman to act as assistant manager (for swimming and other minor sports), who shall automatically become manager during his first class year.

(3) Members of team: All members of Varsity swimming team are selected from results in competitive swimming; when recommended by coaches of class teams; or from class work.

271. Events for Dual Meet.—(In official order):

1. 50 Yard Swim.
2. Fancy Diving.
3. 220 Yard Swim.
4. Plunge for Distance.
5. 100 yard swim.
6. First Half of Water Polo.
7. Relay Race (4 men, each to swim at least 50 yards).
8. Second Half of Water Polo.

272. Equipment of Team.—Silk suits of an authorized pattern are furnished to members of the Varsity by the Athletic Department, midshipmen entitled to "N's" or letters for swimming are entitled to wear these letters on suits furnished. Jockey straps are always to be worn during swimming meets, and are furnished by the Athletic Department. Bath robes and towels are not furnished, and must be provided by members of team.

273. Terms.—The official starting signal for all races shall be as follows:

1. Get on your marks.
2. Get set.
3. Pistol shot.

On 1, Get on your marks, the contestant steps to the edge of the pool, his toes extended over the edge, body erect.

2. Get set, the contestant leans forward toward the edge of the pool, his body crouched with the arms extended backward, weight on the balls of his feet.

Note: Interval between 1 and 2 is usually determined by the speed with which contestants step to their mark. A referee should see that all men step to the mark at once.

3. Pistol shot, the interval between 2 and 3 is usually brief. It should not be attempted to hold a man in this cramped balanced position, but the gun should follow in on "Get set."

Turning: This means that a contestant in turning must, under penalty of disqualification, touch the end of the pool with one or both hands before pushing off.

Time: Time means the record taken by at least three watches; if watches disagree the time is the middle watch. For an official record if watches

disagree, the slowest watch shall be the official time. All watches must be in working order and subject to Referee's inspection.

Fouls: Fouls are given under the rules, and are thus termed when declared by the Referee, or judges.

False start: Is constituted when any contestant leaves the starting mark prior to the gun. Three false starts disqualify a contestant.

274. The Course.—The swimming pool shall not be smaller than 60 feet. The standard tank for intercollegiate swimming, water polo, etc., is 75 feet long, which gives an increment of 25 yards, a definite width is not required, depth should be at least 6 feet.

275. Scoring of Points.—In dual meets places in events have the following value—

In relay race:

First place.....8 points.
Second place.....0 points.

In all other events:

First place.....5 points.
Second place.....3 points
Third place.....1 point.

276. Limitation of Contestants.—In dual meets the number of contestants for any event is limited to two for each team with the exception of the relay race, when four contestants comprise the team. No contestant shall compete in more than three different events in a dual meet (water polo excepted).

SWIMMING IN GENERAL

277. Floating.—The ability to float varies with individuals. It is dependent almost wholly upon the physique. In fact, many of the best swimmers have been able to perform this feat only after long and deliberate concentration of effort, and sometimes then, only for short periods. Floating is an ideal method of securing rest when tired from swimming in a heavy surf, and, to a great extent is an essential to trick swimming. The construction of the bones of women as compared with men is such that generally speaking more women than men are able to float, and few men float in fresh water. To imagine that the body will float in any position on the water is a mistake. The correct position will show the arms and legs spread as in the second movement of the Back Stroke (Fig. 133).

Persons who have mastered the back stroke will find that floating comes easily with practice. The inflation of the lungs with plenty of fresh air and the resting of the head back to a comfortable position are essential

until the balance has been attained. After that breathing should be perfectly natural. Sometimes it has been found necessary to draw the knees up under the body before the necessary buoyancy is obtained. To regain the feet force the head down in the water.

FIG. 133. Correct Position for Floating

278. Treading Water.—It is generally imagined that treading water is a very easy method of progression, possibly because the action by which it is accomplished appears to be almost the same as that of walking. There are some unusual stories as to the ability of the soldiers of Frederick the Great, crossing rivers in this fashion, with their arms and ammunition carried above the head, to prevent damage by water, and these legends are actually credited by many persons whose knowledge of swimming is limited. In order to tread water properly, swimming first of all must be learned, and to do it with ease the arms must be used as well as the legs, otherwise the legs have to be moved so rapidly that exhaustion soon follows, for it is by no means a pleasure or a rest to keep the head on the surface by the action of the feet only when the body is in a perpendicular position. There are three well known methods of treading water and since water polo has come into vogue they have been far more practiced, perhaps involuntarily, than was previously the case. In the first method the hands are placed on the hips, the head is bent back, the chest inflated, and the body brought to a perpendicular position. The legs are then moved alternately, the water being struck by the sole of the foot, and the legs kicked outwards from the knees to the front and then drawn backward. This action causes the body to move forward. The head is kept in its normal position in the second method, the arms are folded across the chest, the legs drawn alternately backwards and the water struck by the front of the foot. When quick strokes are taken the body glides backwards. The third method is perhaps the most common. The arms are extended at right angles to the body, with the palms downward, and the

head remaining in a normal position, with the chin above water. As regards leg action, some swimmers use the breast stroke kick, while others use one of the other two methods described above; but when both legs are used simultaneously the body remains almost in the same spot, although it rises considerably out of the water at each kick.

279. Swimming Under the Water.—In order to swim under the water with the greatest amount of speed use the Breast Stroke. Inflate the lungs with air and dive into the water trying to maintain the body at a uniform depth. A strenuous and deep immersion might lead to drowning from exhaustion. Release the pressure from the chest through the mouth. When it is felt that the breath is shortening throw the head back sharply to come to the surface.

280. Retrieving.—Swim along the surface of the water, drop the head forward at the same time sweeping the arms from the reach position on line with shoulders to yard position. (Fig. 102.)

DIVING

281. Teaching the Beginner.—Anyone may learn to dive but the quality of the dive depends largely upon the lines or curvature of a person's body. Ordinarily the person of thin general frame with small hips and solid legs will make an expert diver with practice. It is not necessary to be an expert or even a good swimmer in order to be able to perform a good dive. In fact, many poor swimmers have been known to excel in diving. After the pupil has mastered the rudiments of swimming, he must next learn to use the spring board. In order to guard the head from striking the bottom let the arms be extended overhead with the thumbs locked and the head low. Bend the body toward the water from the hips. Generally in order to assist the pupil on the first few dives ask him to raise one of his legs backward. This leg is grasped with one hand placing the other around the waist, as he comes further toward the water and gradually loses his balance, throw his leg up and involuntarily he will throw the other up to meet it. This gives the idea of pushing from the ball of the feet and from the knees. Shortly the idea of throwing the legs back of the body will be mastered and it is then only a matter of correcting such faults as spreading the legs or keeping the head too high, etc. The more advanced dives may then be practiced.

282. Advanced Dives.—Stand with the right or left side to the water, arms overhead, head thrown back. Push from the toes, the body entering the water sideways. Toes must be pointed and back well arched.

FIG. 134. Racing Start

Jack knife: Face the pool with the toes close to the edge of the board, spring upward from the board until the body is bent forward from the hips down. Attempt to touch the toes with the knees stiff. Drop the head sharply, pushing the legs upward, enter the water with the toes pointed, the body in a straight line. In competition the body must enter the water less than six feet from the edge of the board, shown by a black line painted on the bottom or side of the tank. This dive is taken running or standing. Swan Dive: Face the pool, arms close to the side, push out from the edge of the board at an angle, slowly raising the arms from the side until they are on line with the shoulders. Hold the position for a moment. Extend the arms sharply overhead as the body strikes the water. The angle of entering the water is from 50 to 60 degrees. Back Dive: From a position with the back to the pool, heels over the edge and toes close to the edge of the board, push upward from the board, dropping the chin back and entering the water with the arms extended overhead, but as it is mastered, start with the arms at the side and extend the arms only as the head is ready to enter. The arms are brought in a half circle forward and upward to the extended position.

Flying Dutchman—forward gainer: From a position facing the pool, with the toes at the edge of the board, throw the face upward and push the feet out and up from the board. Enter the water with the face toward the

board. Neck dive: Lie on your back. Raise the legs upward and drop over, entering the water feet first.

Forward somersault: Stand close to the edge of the board. Push up, tucking the head forward, drawing the knees into the stomach and swinging the arms backward sharply, entering the water feet first.

Forward one-and-one-half somersault: This is generally executed with a run as above. The added momentum of the arm swing throws the body around for an added half turn, the body entering the water head foremost.

Full twist: (corkscrew or dolphin): This is performed facing the board from a running or standing start. A sharp twist of the body from the hips, swinging the arms around to assist further in twisting in the air, enter the water face forward. Standing-sitting-standing: Stand with the palms facing the board and toes close to its edge. Drop the body to a sitting position, legs at right angles to the rest of the body. Draw the knees under the body to a standing position and enter head first.

Handstand dive: Raise the body on the hands and enter the water head first.

BOXING

BOXING

BY H. M. "SPIKE" WEBB

Boxing Coach and Instructor, United States Naval Academy. Boxing Instructor, American Expeditionary Forces in France during the War with Germany. Coach United States Army Team, Winners of Inter-allied Boxing Championship, Pershing Stadium, Paris, France, 1919. Coach, United States Olympic Team, Winners of Individual Boxing Championship, Antwerp, Belgium, 1920. Coach United States Naval Academy Team, Winners of Intercollegiate Boxing Championship 1920-1921

TEST C

The following tests are described for one who boxes with the left foot and the left hand forward.

NOTE: Rules to satisfaction of the instructor.

284. Clinching the Fist.—Bring the tips of the fingers well into the palm of the hand with the thumb turned over the first joint of the index finger and the end of the thumb even with the second joint of the middle finger. The wrist and the back of the hand should be in a straight line. Keep the hands firmly closed while hitting and hold them in such a position that the back knuckles will be the point of contact.

FIG. 135. Clinching the Fist

FIG. 136. Clinching the Fist

285. On Guard Position.—Advance one step forward with the left foot and turn the toes slightly in keeping the foot a trifle to the left of the right foot. Place the right foot on an angle of forty-five degrees from the

opponent and raise the heel at least one inch from the floor. Bend both knees slightly forward and divide the weight of the body equally as possible on both of the feet. Extend the left arm towards the opponent, the arm slightly bent and the elbow turned down. Raise the right hand on a line with the left elbow so that it will be in the front of the center of the body. Clinch both of the fists and turn the palms slightly down so that the knuckles will be on top. Keep the body turned well around to the right side. Keep the chin down and the teeth tightly closed. Relax all muscles, as any tendency towards rigidity will not only tire, but will greatly detract from speed and force in leading or countering. Do not focus the sight on any certain point of the opponent's face or body.

FIG. 137. On Guard

FIG. 138. On Guard

286. Advance.—Advance one step forward with the left foot immediately followed by the right foot.

287. Retreat.—Retreat one step backward with the right foot immediately followed by the left foot.

288. Left Step.—Take one step with the left foot to the left side immediately followed by the right foot.

289. Right Step.—Take one step with the right foot to the right side immediately followed by the left foot.

FIG. 139. Advance

FIG. 140. Retreat

FIG. 141. Left Step

FIG. 142. Right Step

290. Left Hand Lead to the Face.—Advance one step forward with the left foot and deliver a left hand lead to the opponent's face, the blow landing just as the left foot strikes the floor. Put the weight of the body into the blow by bracing up the muscles of the right leg and allowing the body to move forward simultaneously with the striking arm. After the blow lands, either draw the left foot backward or the right foot forward so that the original boxing position is maintained. As the blow is delivered turn the head slightly to the right side, and hold the right hand in a position to guard or follow up.

FIG. 143. Left Hand Lead to Face

FIG. 144. First Counter for Left Hand Lead at the Face

291. First Counter for a Left Hand Lead at the Face.—Block the lead by placing the right hand in front of the face and then counter with a straight left hand blow to the opponent's face.

292. Second Counter for a Left Hand Lead at the Face.—Slip the lead by moving the head to the right side and then counter with a straight left hand blow to the opponent's body.

293. Left Hand Lead to the Body.—Advance one step forward with the left foot and deliver a left hand lead to the opponent's body, the blow landing just as the left foot strikes the floor. Put the weight of the body into the blow by bracing up the muscles of the right leg and allowing the body to move forward simultaneously with the striking arm. After the blow lands, either draw the left foot backward or the right foot forward so that the original boxing position is maintained.

FIG. 145. Second Counter for Left Hand Lead at the Face

FIG. 146. Left Hand Lead to Body

FIG. 147. First Counter for Left Hand Lead at the Body

FIG. 148. Second Counter for Left Hand Lead at the Body

294. First Counter for a Left Hand Lead at the Body.—Block the head by placing the right hand in front of the body and then counter with a straight left hand blow to the opponent's face.

295. Second Counter for a Left Hand Lead at the Body.—Retreat sufficiently to cause the lead to miss; immediately after, advance and counter with a straight left hand blow to the opponent's face.

FIG. 148a. Counter for Left Hand Lead at the Body

FIG. 149. Right Hand Lead to Face

296. Right Hand Lead to the Face.—Advance one step forward and slightly to the left side with the left foot and deliver a right hand lead to the opponent's face, the blow landing just as the foot strikes the floor. Put the weight of the body into the blow by bracing up the muscles of the right leg and allowing the body to move forward simultaneously with the striking arm. After the blow lands, either draw the left foot backward or the right foot forward so that the original boxing position is maintained. As the blow starts draw the left arm in to protect the face and body.

297. First Counter for a Right Hand Lead at the Face.—Block the lead by placing the left hand in front of the face and then counter with a straight right hand blow to the opponent's face.

FIG. 150. First Counter for Right Hand Lead at the Face

FIG. 151. Second Counter for Right Hand Lead at the Face

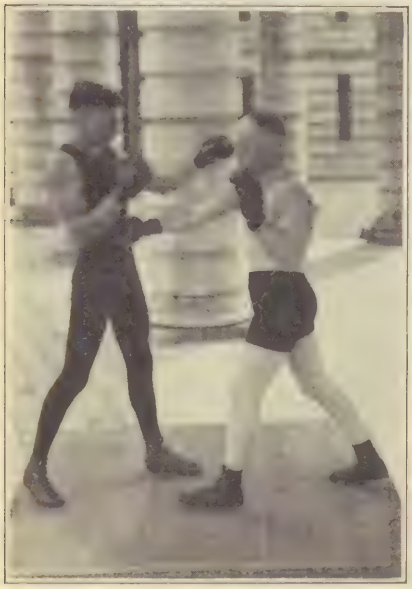

FIG. 152. Right Hand Lead to Body

FIG. 153. First Counter for Right Hand Lead at the Body

298. Second Counter for a Right Hand Lead at the Face.—Slip the lead by moving the head to the left side and then counter with a straight right hand blow to the opponent's body.

299. Right Hand Lead to the Body.—Advance one step forward and slightly to the left side with the left foot and deliver a right hand lead to the opponent's body, the blow landing just as the left foot strikes the floor. Put the weight of the body into the blow by bracing up the muscles of the right leg and allowing the body to move forward simultaneously with the striking arm. After the blow lands, either draw the left foot backward or the right foot forward so that the original boxing position is maintained. As the blow starts draw the left arm in to protect the face and body.

FIG. 154. Second Counter for Right Hand Lead at the Body

FIG. 155. Slipping a Left Hand Lead

300. First Counter for a Right Hand Lead at the Body.—Block the lead by placing the left hand in front of the body and then counter with a straight right hand blow to the opponent's body.

301. Second Counter for a Right Hand Lead at the Body.—Retreat sufficiently to cause the lead to miss, immediately after advance and counter with a right hand blow to the opponent's face.

302. Slipping.—Slipping is the moving of the head either to the right or the left side to avoid a straight blow.

303. Slipping a Left Hand Lead.—To avoid a left hand lead move the head sufficiently to the left side, causing the blow to miss.

304. Slipping a Right Hand Lead.—To avoid a right hand lead move the head sufficiently to the right side, causing the blow to miss.

305. Shadow Boxing.—Box one round with an imaginary opponent. Perform with snap and precision all the movements which are required in Test C.

306. Boxing.—Box one round with an opponent. Perform with snap and precision all the movements which are required in Test C.

TEST B

307. Straight Left Hand Blow to the Face as a Counter.—Block a left hand hook with the right hand and then counter with a straight left hand blow to the opponent's face.

FIG. 156. Slipping a Right Hand Lead

FIG. 157. Straight Left Hand Blow to Face as a Counter

308. Straight Left Hand Blow to the Body as a Counter.—Block a left hand hook with the right hand and then counter with a straight left hand blow to the opponent's body.

FIG. 158. Straight Left Hand Blow to Body as a Counter

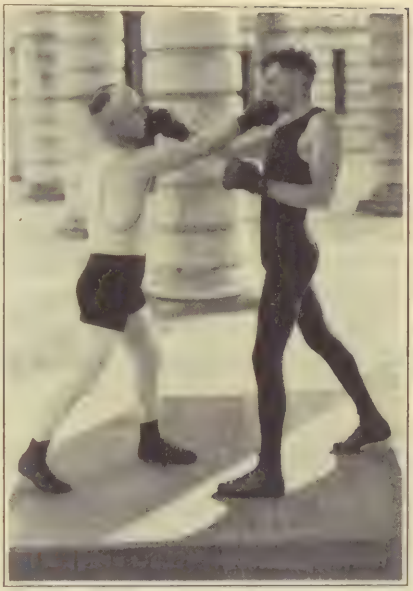

FIG. 159. Straight Right Hand Blow to Face as a Counter

FIG. 160. Straight Right Hand Blow to Body as a Counter

FIG. 161. Position for Infighting

309. Straight Right Hand Blow to the Face as a Counter.—Block a right hand hook with the left hand and then counter with a straight right hand blow to the opponent's face.

FIG. 162. Infighting. Left Hand Hook to Body

FIG. 163. Infighting. Right Hand Hook to Body

310. Straight Right Hand Blow to the Body as a Counter.—Block a right hand hook with the left hand and then counter with a straight right hand blow to the opponent's body.

311. Infighting.—Advance close up to the opponent and deliver short hooks to the body. The best method of getting within close range is by crouching well forward and then stepping in after having slipped or blocked a blow. Keep close up to the opponent and follow if he attempts to retreat.

312. Left Hand Hook to the Body While Infighting.—Advance close up to the opponent and deliver a short left hand hook to the body.

313. Right Hand Hook to the Body While Infighting.—Advance close up to the opponent and deliver a short right hand hook to the body.

314. To Avoid Infighting.—Place the arms around those of the opponent, thus pinning them until the referee gives the command to break.

FIG. 164. Clinching to Avoid In-fighting

FIG. 165. Double Lead, Part One

FIG. 166. Double Lead, Part Two

FIG. 167. Double Counter, Part One

315. Double Leads.—Advance one step forward with the left foot and deliver a left hand lead to the opponent's face, immediately twist the body and deliver a straight right hand blow to the face.

FIG. 168. Double Counter, Part Two

FIG. 169. Side-step No. 1

316. Double Counters.—Slip a left hand lead by moving the head to the left side and then counter with a left hand hook to the opponent's face, immediately twist the body and counter with a right hand hook to the body.

317. Side-Stepping.—Side-stepping is generally resorted to in avoiding rushes. In order to perform this move one must be particularly quick and have the legs completely under the most perfect control. This manœuvre helps the boxer to get out of bad ring predicaments, especially when driven too near the ropes. When performed spontaneously, it saves much exertion, and it often happens that the impetus of the opponent's rush, which when eluded, causes him to lose his balance, perhaps so slightly, but during that time it is possible to deliver effective blows to face or body.

318. Side-Step Number One.—To avoid a left hand lead step with the left foot to the right side bending the body to the right and slightly forward.

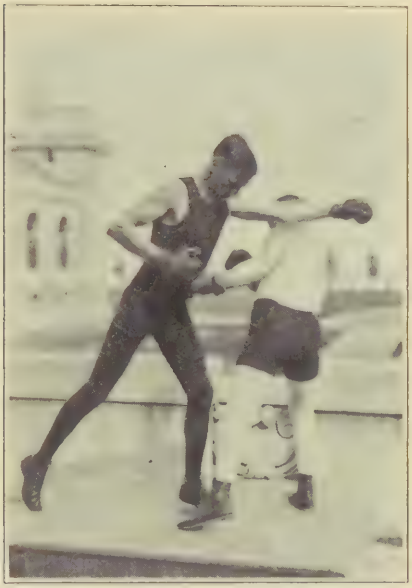

FIG. 170. Side-step No. 2

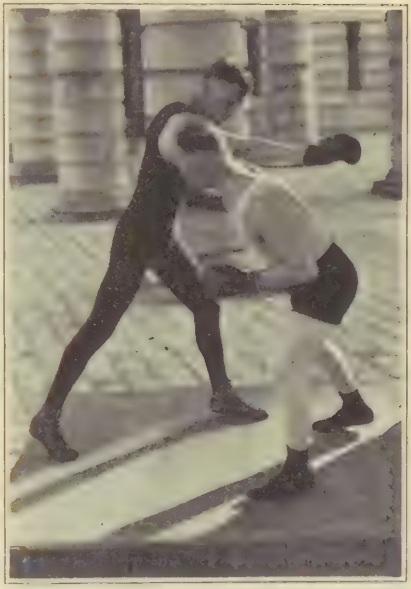

FIG. 171. Side-step No. 3

FIG. 172. Side-step No. 4

319. Side-Step Number Two.—To avoid a left hand lead step with the right foot to the right side bending the body to the right and slightly forward.

320. Side-Step Number Three.—To avoid a right hand lead step with the left foot to the left side bending the body to the left and slightly forward.

321. Side-Step Number Four.—To avoid a rush or to get away from the ropes turn the body a quarter turn to the right side by pivoting on the balls of both feet and then stepping off with the left foot.

322. Hooks.—The hook blow which is a favorite among most boxers is delivered with a short curved motion of the arm, in other words, it is a

FIG. 173. Position of Hand When Landing Hook

FIG. 174. Position of Hand When Landing Hook

FIG. 175. Position of Hand When Starting a Hook

medium between a swing and a straight blow. There are two methods of hooking. The first is known as an inside hook which is delivered by keeping the arm close to the side of the body with the palm of the hand turned up, turning the arm over in a cork-screw manner as the blow is about to land. The second method is known as an outside hook which is delivered by crooking and raising the arm to the side as the blow starts.

FIG. 176. Left Hand Hook to Jaw as a Counter

FIG. 177. Left Hand Hook to Body as a Counter

323. Left Hand Hook to the Face as a Counter.—Block a left hand lead or hook with the right hand and then counter with an inside left hand hook to the opponent's face.

324. Left Hand Hook to the Body as a Counter.—Block a left hand lead or hook with the right hand and then counter with an inside left hand hook to the opponent's body.

325. Right Hand Hook to the Face as a Counter.—Block a right hand lead or hook with the left hand and then counter with an inside right hand hook to the opponent's face.

326. Right Hand Hook to the Body as a Counter.—Slip a left hand lead by moving the head to the left side and then counter with an inside right hand hook to the opponent's body.

FIG. 178. Right Hand Hook to Jaw as a Counter

FIG. 179. Right Hand Hook to Body as a Counter

FIG. 180. One-Two Punch, No. 1

FIG. 181. One-Two Punch, No. 1

FIG. 182. One-Two Punch, No. 2

FIG. 183. One-Two Punch, No. 2

327. One-Two Punch.—The one-two punch is the simultaneous delivery of two blows; namely, the left hand lead to the face followed by an inside right hand hook or vice versa. This double punch requires a quick eye and certainty of purpose to land; the effectiveness of it is beyond doubt.

328. One-Two Punch. Number One.—Deliver a left hand lead just as the opponent starts advancing and then follow through with an inside right hand hook.

329. One-Two Punch. Number Two.—Shift the body around to the left side and then deliver a short backhanded blow with the right hand, followed through with an outside left hand hook.

330. Shadow Boxing.—Box two rounds with an imaginary opponent. Perform with snap and precision all the movements which are required in Test B.

331. Boxing.—Box two rounds with an opponent. Perform with snap and precision all the movements which are required in Test B.

TEST "A"

332. Uppercuts.—The uppercut is delivered at close range after slipping or blocking a lead or hook. This particular punch is very effective against

a boxer who rushes in with his head down. To make the uppercut productive, contract the arm muscles, bend the knees slightly, and drive the hand, with the palm turned in, to the opponent's chin or body, putting the weight of the body behind the uppercut by straightening the knees and lifting with the back muscles as the punch starts.

FIG. 184. Position of Fist When Delivering Uppercut

FIG. 185. Position of Fist When Delivering Uppercut

333. Left Hand Uppercut to the Chin.—Advance one step forward with the left foot and deliver a left hand uppercut to the opponent's chin. The uppercut landing a trifle after the left foot strikes the floor.

334. First Counter for a Left Hand Uppercut at the Chin.—Block the uppercut with the right hand and then counter with a left hand hook to the opponent's body.

335. Second Counter for a Left Hand Uppercut at the Chin.—Block the uppercut with the right hand and then counter with a left hand hook to the opponent's face.

336. Right Hand Uppercut to the Chin.—Advance one step forward with the left foot and deliver a right hand uppercut to the opponent's chin, the uppercut landing a trifle after the left foot strikes the floor.

337. First Counter for a Right Hand Uppercut at the Chin.—Block the uppercut with the left forearm and then counter with a right hand hook to the opponent's body.

Fig. 186. Left Hand Uppercut to Chin

Fig. 187. First Counter for Left Hand Uppercut at Chin

Fig. 188. Second Counter for Left Hand Uppercut at Chin

Fig. 189. Right Hand Uppercut to Chin

338. Second Counter for a Right Hand Uppercut at the Chin.—Retreat sufficiently to cause the uppercut to miss; immediately after, advance and counter with a straight right hand punch to the opponent's face.

339. Left Hand Uppercut to the Chin as a Counter.—Block a left hand hook with the right hand and then counter with a left hand uppercut to the opponent's chin.

339-A. Right Hand Uppercut to the Chin as a Counter.—Block a right hand hook with the left hand and then counter with a right hand uppercut to the opponent's chin.

FIG. 190. First Counter for Right Hand Uppercut at Chin

FIG. 191. Second Counter for Right Hand Uppercut at Chin

340. Four Important Cross-Counters.—There are four cross-counters which are considered, as far as actual fighting is concerned, the most important and effective of all punches. The result of the cross-counter manœuvre is that the attacking arm by passing over the shoulder causes the opponent's head to come forward, thus placing it in an utterly defenseless position for the countering hand.

341. Cross-Counter Number One.—Move the head sufficiently to the left side, causing a straight left hand lead to pass over the right shoulder. At the same time move the right hand forward on the outside of the attacking arm and counter with a right hand hook to the opponent's face.

FIG. 192. Left Hand Uppercut to Chin as a Counter

FIG. 193. Right Hand Uppercut to Chin as a Counter

342. Cross-Counter Number Two.—Move the head sufficiently to the left side, causing a straight left hand lead to pass over the right shoulder. At the same time crouch slightly forward and counter with a right hand hook to the opponent's body.

343. Cross-Counter Number Three.—Move the head sufficiently to the right side, causing a straight left hand lead to pass over the left shoulder. At the same time move the left hand forward on the inside of the attacking arm and counter with a left hand hook to the opponent's face.

344. Cross-Counter Number Four.—Move the head sufficiently to the right side, causing a straight left hand lead to pass over the left shoulder. At the same time crouch slightly forward and counter with a left hand hook to the opponent's body.

345. Left Hand Pin and Right Hand Hook.—Extend the left arm forward pressing the palm of the hand against the opponent's left forearm and then deliver an outside right hand hook to the face.

346. Right Hand Pin and Left Hand Hook.—Extend the right arm forward pressing the palm of the hand against the opponent's left forearm and then deliver an outside left hand hook to the face.

FIG. 194. Cross-Counter No. 1

FIG. 195. Cross-Counter No. 2

347. Shadow Boxing.—Box three rounds with an imaginary opponent. Perform with snap and precision all the movements which are required in Test A.

347-A. Boxing.—Box three rounds with an opponent. Perform with snap and precision all the movements which are required in Test A.

BOXING AN ASSET TO MILITARY MANPOWER

Military life is a matter of bodily skill and mental dexterity. The ideal fighting man of today is an athlete trained to use, during periods of excitement and physical exhaustion, every ounce of strength and all the skill he possesses. He is a man who dares look danger in the face, not with foolhardy resolve, but with a mind trained to judge and respect its potency. His physical development is such that he has strong and quick legs, a keen eye, and a cool head, qualities which enable him to undergo nerve-racking and trying experiences. Physical development is most essential and boxing furnishes one of the most powerful agencies for securing a foundation upon which to develop the fighting man. Boxing requires a high degree of mental concentration, alertness, and body control. It develops to a marked degree, courage and self reliance. It has for its aim the over-coming of an opponent who, likewise, is using

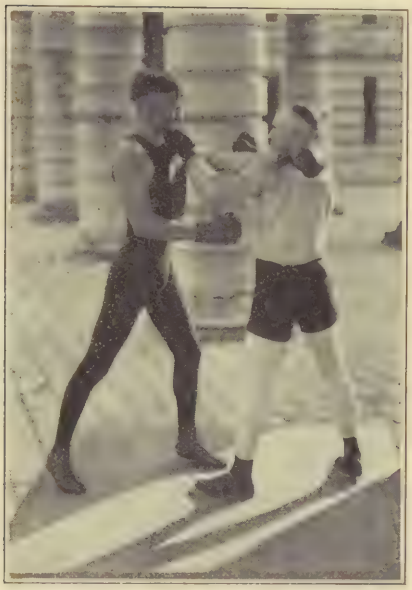

FIG. 196 A. Cross-Counter No. 4

FIG. 196. Cross-Counter No. 3

FIG. 197. Left Pin and Right Hook
First Part

FIG. 198. Left Pin and Right Hook
Second Part

FIG. 199. Right Pin and Left Hook First Part

FIG. 200. Right Pin and Left Hook Second Part

his own brains and strength in opposition. The big contribution of boxing to military training is that it develops aggressiveness, willingness and ability to fight effectively at close quarters, and a fearless determination to see the thing through. The fighting spirit developed by boxing plays a strong part in fighting with weapons, for a very slight advantage in skill often gives victory, and one success steels the spirit to achieve the impossible. Boxing during the great war played a most important part in developing the fighting spirit of the United States Navy and Army, the result was that our men considered themselves the equal of any two of the enemy. Boxing was so prevalent among the American soldiers, and considered so essential by the military authorities, that raiding parties were trained in this art and bouts were constantly being held even under the very shadow of the enemy's guns. In modern warfare the boxing spirit dominates.

The man trained to quick thinking and to quick acting is the man who gives the best account of himself under trying conditions. War is always a serious game in which every man must play his part to the limit, giving his best to his country. The sailor or soldier when representing his country in battle must run the gauntlet of hardships imposed even unto death. It is, therefore, necessary to prepare as far as it is humanly

possible to meet the exigences of modern warfare. Participation in boxing helps to furnish the means. It gives the man an aggressive spirit which in turn makes him feel that he is superior to the enemy and gives him the confidence and spirit to keep going forward and win when the task seems impossible. Other sports in a way are more or less helpful in developing a man's physique, but they do not test his quickness of mind, his gameness, skill and endurance, as in boxing. It takes a strenuous, thrilling sport to develop strenuous, thrilling men. It does not require any great amount of courage to play baseball, but it certainly does to combat a long bout within the ring against a dangerous opponent. And that's the reason why boxing in the days of the great war out-ranked, outflanked, out-speeded, out-gamed and out-shone, any other sport. The Americans went into a bayonet charge with the same grit and determination that a boxer does when he enters the roped arena. The combination of the two methods of fighting proved too much for the enemy and he constantly took the defensive or a flying retreat.

COACHING

All candidates should report to the coach at least six weeks before the opening of the boxing season. The coach should explain the system which will be used throughout the season. It is well to explain what is expected of those who make the squad, as well as the value of boxing.

To get the maximum results the coach has to give every attention to the proper handling of his boxers. One must analyze character, study personality and the mental, moral, and physical makeup of each boxer on the squad. Though no set rules can be laid down, experiences are constantly suggesting certain fixed principles that can be successfully followed. Experience has proved that overtraining, careless eating, lack of rest, injuries, and friction among the members of the squad lead to defeat. The coach should have the faculty of being able to judge a man's boxing ability. He must know when to drive and when to coax.

The coach can best instruct his men by putting on the gloves to illustrate exactly what he wants done. He should demonstrate to the squad various blows, counters, and moves, as well as explain the rules. If the coach cannot prove he is correct in his teaching he imparts lack of confidence to his men.

Condition is the main factor. The boxer must have strength, endurance, speed, and skill to overcome the strain of competition. Lack of condition hinders the overcoming of obstacles in the fight for victory.

The overtrained boxer enters the ring tired and lacks aggressiveness. His spirit is low and his confidence fails him because he has not the physical

power to produce results. The boxer who thinks he cannot win generally defeats himself.

If the members of the squad have confidence in the coach and in each other, and if they have a constant interest in the progress of each boxer, the team's spirit is greatly strengthened.

The main requirement is constant training, not the kind that tires or bruises, but the kind that develops endurance, speed, and hitting powers. Along with the ability to train, the boxer must above all possess a real fighter's heart.

The discipline of the squad must be strict and rigid. Orders must be obeyed unquestioningly. The extent to which the boxers observe training rules depends upon the coach and the example he sets. The coach must insist upon the strictest adherence to training rules and must never tolerate a boxer who commits excesses. The midshipman owes it to himself and to the Academy which he represents to be conscientious in training habits, not only when in actual training but also when out of training. Lack of earnestness will eliminate anyone from the boxing game.

One of the first requisites in developing a boxing team is a close study of the entire season's schedule. It is not wise to follow the same plan of former seasons, although the same rival teams may be on the schedule, for the coach will find all sorts of problems facing him, such as the arrangement of bouts on the schedule, injuries, and other causes.

Mental training helps tremendously in boxing. The boxer should be a clearminded, keen thinker, who is never idle in the ring. He should make every second teem with action; he should be able to step about with uncanny speed and punch with force from every conceivable angle. Boxing requires very quick thinking, and the boxer who cannot decide what to do at the psychological moment cannot hope to become a first class boxer. A moment's hesitation may play havoc and spell disaster to him. The boxer should have his moves planned out carefully in advance before attempting them. In other words, the coach must see that the boxer follows a system though it requires time and study to learn it. In training for a bout, brains must not be neglected for brawn.

TRAINING

The boxer, in order to get into the best possible condition, must be very careful how he trains. Though it is not necessary to go to extremes like the boxers of the old school were required to do, yet it is necessary for the boxer to be methodical in all his habits. The boxer must be a possessor of a good, strong, healthy, normal body. The man who is broken down by

excesses of any kind will not go far in the fistic game. The boxer must train gradually, so as not to injure himself before he is properly schooled and conditioned. Start off with the more simple fundamentals, such as running, rope skipping, shadow boxing, bag punching, and other forms of exercise to strengthen the body. Be careful to avoid too much running or too much of other exercise while the muscles are soft, as it is very easy to develop muscular ailments which will retard the progress of the boxer for some time. It is equally important that the mental training be watched and just as carefully developed. Several weeks of this sort of training, before the stress of real work begins gives a wonderful opportunity to discover men with real fighting ability, who will with the proper schooling make valuable members of the squad.

Experience has proved that no two men can be trained successfully on the same plan. It is wrong to work every boxer in the same way and by the same amount of exercise. The characteristics of each boxer must furnish the data for the coach's allotment of work. Never work a boxer until tired and exhausted. He should always leave the gymnasium feeling full of energy. Great care must be taken that the boxer does not go stale.

The hours of training should not vary. The meal hours must be regular. The same regularity must be observed in the hour at which the boxer retires at night and rises in the morning. Fresh air is indispensable. The boxer should sleep in a room filled with fresh air. The gymnasium should be well aired. In fact, the boxer should do as much work as possible in the open, as fresh air is often more valuable than any quality of medicine.

The boxer to get into the best possible condition must be very careful as to what he eats. His diet should consist chiefly of fresh vegetables, cereals, toast and butter, eggs and fruit, with fresh meat and fish not oftener than once a day. His system needs not only the kind of food that is rich in nutriment, but vegetables and other coarser food that gives bulk and stimulates the action of the intestines. Not only is it necessary to eat wisely but it is also important to pass off the waste material by regular movements of the bowels. For when this is not done, he is likely to feel ill. It is well to take a mild dose of physic once a week, while in actual training, this keeps the system purged from impurities.

Cleanliness is important to the health of the boxer. He should take a shower bath after each workout, followed by a rub down. This will be of great aid in getting into tip-top shape.

The boxer, in order to do his best, should be provided with the proper clothing. It is well to wear full length tights and top shirt while training in the gymnasium. The boxing shoes must be well fitted, as the boxer

must have a good footing. Loose shoes are a source of annoyance and should never be worn. Regulation boxing shoes should be worn while boxing on canvas, while rubber sole shoes should be worn while boxing on a wooden floor. Dress warmly while running out of doors and wear stout shoes.

Bandaging the hands while boxing is necessary for most boxers. This is especially true when there is a liability of injuring a weak hand or wrist. The wearing of bandages in the proper manner will prevent many injuries, which, while they may be trivial, would nevertheless retard the training of the boxer.

Any injuries which the boxer may receive should be attended to immediately by the medical officer in charge. A boxer is as susceptible to injury as any other athlete, and his period of convalescence will be just as long. Prompt attention to split lips, cuts over the eyes, sprained thumbs, bruised knuckles, or any other injury, will shorten the time of recuperation. The boxer must learn the proper way to breathe while boxing and exercising. He should breathe through the nose, as it is very important while boxing to keep the mouth closed and the teeth tightly set, for a blow on the jaw while the mouth is open, or the teeth loosely closed, may result in a broken jaw or the chipping of the teeth.

FIG. A. Shoulder Exercise. Part One

FIG. B. Shoulder Exercise. Part Two

FIG. C. Feinting

FIG. D. Feinting

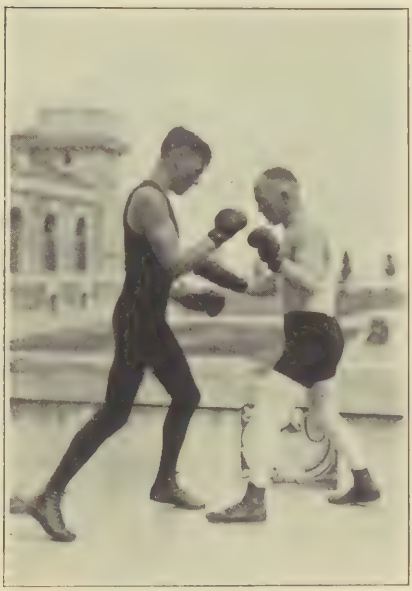

FIG. E. Feinting

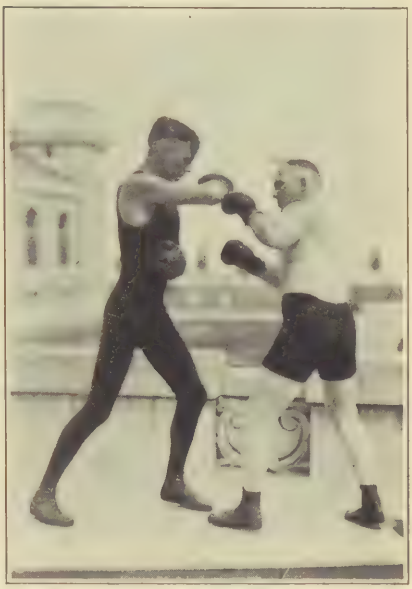

FIG. F. Feinting

The boxer must learn the knack of relaxing, as this is a big factor while boxing. Never stand with the legs too far apart, as it will not only lessen speed but will strain the muscles and eventually cause them to become tired and weary. Keep stepping about while boxing, relaxing the arms and legs when out of hitting distance. Never strain a muscle unless absolutely necessary.

The method of reducing or adding to the weight of the boxer is generally understood by most trainers. But the process must be carried out on scientific principles. Taking too much weight off a boxer is weakening and experiences have shown that it is injurious. A man will, at his normal weight, box better than one who is under or overweight. If it is necessary for the boxer to reduce weight, it should be done by running out of doors, shadow boxing, rope skipping or dieting. Never go into a hot room in order to make weight unless absolutely necessary. The boxer should be within two pounds of the required weight two days before the time for weighing in. By regulating his food and doing light work he will gradually dry out to the required weight without losing strength. If the boxer is under weight and cares to put on a few pounds he may do so by getting plenty of sleep, and eating plenty of good wholesome food.

There is no exercise more healthful and beneficial to the boxer than running out of doors. Running assists enormously in building up the physique. However, it must be properly supervised. Never run until exhausted, as excessive running does much harm. When the boxer finishes the run and is overheated, he must never loll around in the open and cool off, as this is a sure way to catch cold.

The boxer, in order to hit hard and step about with speed, must perfect a system of muscular coordination. The muscles of the arms, legs, and body in every move, must coordinate. This may be obtained through the use of combination exercises designed to employ simultaneously every part of the muscular system applicable to boxing.

Shadow boxing is the best combination exercise for the boxer. It develops quickness of the entire body and good boxing form. This exercise should be made as real as possible, the boxer performing with snap and precision all the movements required in actual boxing.

Rope skipping, another splendid combination exercise, which brings into play every individual group of muscles, is a wonderful aid to the development of the agile movements of the legs.

Bag punching, the combination exercise next in importance to shadow boxing, not only brings into play every muscle, but also develops the quickness of eye and action so indispensable in actual combat

Dummy punching is another good combination exercise. It brings into play every muscle and develops hitting ability.

The boxer should learn the value of delivering a blow correctly. Always hit with the front of the knuckles. The wrist should be straight when landing so that there will be a straight linea long the forearm to the knuckles. Learn to judge distance and time correctly, so that the effort to land a blow will not be wasted. It is better to spend considerable time to master straight hitting thoroughly, than to waste it on swinging punches. Keep in mind that a straight line is the shortest distance between two points and that the success of any blow depends upon its speed and unexpectedness. Do not try to land a knockout blow each time, but reserve it until the proper opening presents itself. Pay careful attention to the position of the hands and arms. The muscles should be relaxed and should only be held tense at the moment of striking. To make the blow more effective allow the body to move forward simultaneously with the striking arm.

FIG. G. Left Side-step after a Feint

FIG. G-2. Going into a Clinch

The boxer having the most chances of winning is the one with the better judgment of distance. Many a boxer misses blows owing to a defect in visual appreciation of a given measurement. To remedy this the eye should be trained to take in to the infinitesimal part of an inch,

the distance between it and a striking point. A blow that fails to land is but wasted energy, and a skillful boxer is the one who thro wsa way as few punches as possible. A blow well timed and well judged should land eight out of ten times.

Feinting plays an important part in the science of boxing. Its object is to mislead the opponent. It often draws him off his guard and places him in a position where he cannot protect himself. There are many ways of feinting. The eyes, hands, arms, feet and body can be used to deceive the opponent. Good footwork aids feinting. The rapid change of position of the feet combined with false leads to face or body keeps the opponent guessing as to where the attack is intended to be launched.

There are not less than six methods of defense. The first method is the stop by countering. The second method is the retreat, which is a less telling manœuvre. The third method is ducking, a rather dangerous but highly effective device. Ducking in combination with cross-counters works well. The fourth method is sidestepping. The fifth method is blocking with hand or forearm, while the sixth method is slipping to the left or right side.

There is a certain value in clinching which the boxer should know. At times the boxer finds himself open to attack at close range after his blow has been blocked or evaded. It is well when in such a position to throw the arms around those of the opponent, thus pinning them until the referee gives the command to break. When the command is given to break, draw the hands gradually along the opponent's arms, pressing them firmly until the moment comes to spring back into fighting attitude.

FIG. H. Going Out of a Clinch

Conditions constantly arise in boxing, which the boxer has never experienced before. In such cases he has no time to lose; his brain must act instantly. The ability to get out of a bad predicament or to keep the opponent from escaping from one by keen thinking is good generalship. The boxer should study the expression of the opponent's face and be

able to recognize instantly the slightest sign of nervousness. If there is any sign of weakness he must be quick to discover it and to direct his blows in a way that will prove most effective. Do not become excited when the opponent is groggy but box with care. Never let a chance go by and give as few as possible. On the other hand try to keep any sign of pain or

FIG. I. Medicine Ball Exercise

weariness from appearing in the face or action while boxing. The art of avoiding punishment without surrendering any advantage is the highest form of ring generalship.

At least seven qualities should be sought if the ambition of the boxer is to be achieved.

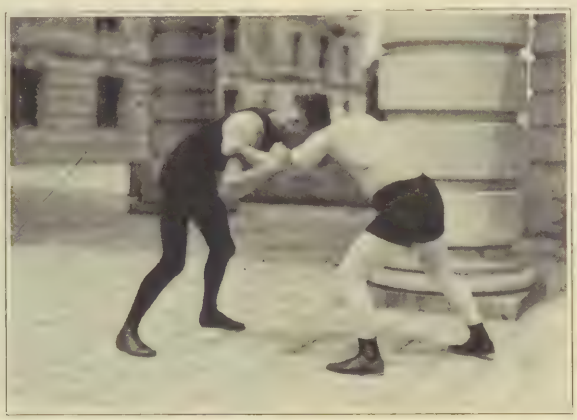

FIG. J. Tugging

FIG. J-1 Tugging

The first is strength and use of the muscles. One may have plenty of strength in his muscles without having large muscles. Quality is more important than quantity. Both may be developed by proper training.

FIG. K. Body Exercise, Part One

The second is endurance. It is the ability to keep battling away under trying conditions. This is what wins.

Third is energy, this means speed, combative spirit, and aggressiveness.

The fourth is sand—a word which means courage, grit, and determination—essential elements to the successful boxer.

FIG. L. Body Exercise. Part Two

FIG. M. Rope Skipping

The fifth is control. Critical moments in boxing bouts show the importance of self control and steady judgment. A cool head invariably triumphs over the man who becomes excited.

The sixth is the ability to hit hard. The boxer who aspires to a title should, with either hand, be able to punch with force. The seventh is generalship, this indicates development of natural advantages, coupled with the intuition and the ability to grasp quickly any advantage of any opening given by the opponent, as well as being able to properly guard against punches. It is well to appreciate the fact that a good defense is on an equal basis with that of hitting, either of which according to quality of execution may lead to victory.

Science in boxing is really the systematized knowledge of the sport. It does not necessarily mean that the man in order to be placed in the scientific class must display a brand of flashy punches or fancy footwork. In numerous cases it has been proven that the better boxer is not he who seems the more clever, but the one who shows more consistent means to

FIG. N. On Guard

FIG. O. Right Hand Hook

FIG. P. Position When Starting Left Hand Hook

FIG. Q. Left Hand Lead

FIG. R. Left Hand Hook to Body

FIG. S. Right Hand Hook to Body

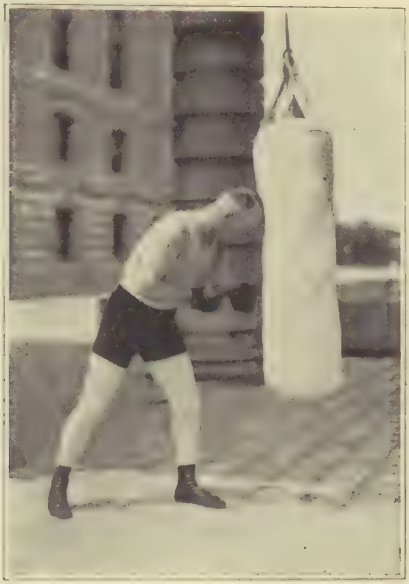

FIG. T. Position When Infighting

win. Science in a large measure comes from proper judging of distance, which is acquired by thorough training.

Very few people know anything in the least about the application of psychology of the glove sport, yet mental concentration plays a tremendous rolê within the roped square. Stop long enough to review those who have climbed the pugilistic ladder to championship honors, and you will find men of a calibre possessed of a sound physical, mental and practical knowledge of boxing, men who know distance with geometrical precision, hit with unerring accuracy, and who are constantly devising new scientific and fantastic additions to the ever progressing pugilistic art; try them in the acid-test of the ring and watch the mental problems develop to success by the working of these physical experiences.

A boxer fortified with the necessary psychological accomplishments will win over the boxer who is well equipped with boxing talent and physical advantages, but lacks the mental quality to bring same into play at he right moment.

There is an old saying that where there's a will there's a way and this very same thing holds good in boxing—for the determination to conquer coupled with concentration on one's boxing are elements that make for SUCCESS.

DEFINITIONS OF TERMS USED IN BOXING

On Guard—In a position to deliver a blow or guard against a blow.

Jab—Fast straight blow with either hand.

Lead—Taking the initiative in attacking opponent with either hand.

Swing—Striking from the side with a wide curved motion of the arm.

Hook—Striking from the side with a short curved motion of the arm.

Chop—A short hook delivered with a downward motion of the arm.

Uppercut—Upward motion of the arm with the palm turned in towards the body.

Criss-Cross—Simultaneous delivery of two blows, one to face followed by one to body or reverse.

Feinting—Any action which is intended to mislead the opponent into thinking that an attack is about to be made.

Footwork—Comprises the proper movement of the feet to enable the boxer to maintain good poise and to help him adapt himself to all phases of defensive and offensive boxing.

Shadow Boxing—Boxing with an imaginary opponent and performing with snap and precision all moves used in actual combat.

Infighting—Boxing at close range.

Counter—Return of a blow.

Cross-Counter—Slipping a blow and countering.
Drawing—Drawing body backward to avoid a blow.
Clinching—Holding an opponent so that he is unable to make an attack.
Breaking—Stepping back from a clinch.
Timing—Sensing an opponent's lead and beating him to the punch.
Telegraphing—Giving away an attack by drawing the arm back before striking.
Crouching—Bending at the waist to deliver or avoid a blow.
Blocking—Rendering an opponent's blow ineffective by blocking it with the hand, shoulder or arm.
Slipping—Moving the head to either side to avoid a straight blow.
Parrying—Diverting an opponent's straight blow by striking the attacking arm with the palm of the hand.
Guarding—Any move that renders an opponent's blow ineffective.
Ducking—Quick bending of the neck to avoid a blow.
One-Two Punch—Simultaneous delivery of two blows, namely—left hand lead to face followed by right hand hook to face or vice versa.
Foul Blow—Hitting below the belt, hitting in clinches or any other move that is not good, clean sportsmanlike boxing.

ESSENTIAL EXERCISES

Shoulder Exercise.—This exercise develops the shoulder muscles and gives freedom of action when delivering a blow. Bend the trunk well forward and then swing the arms in a windmill manner, touching the right ankle with the left hand and the left ankle with the right hand.

Medicine Ball.—This exercise develops the back and arm muscles and aids hitting powers. Stand six feet from partner and toss the ball first with one hand and then the other. Do not let the ball strike the body.

Tugging Exercise.—This exercise develops the body muscles and builds up endurance. Grasp your partner about the neck, arms or body, and tug around, first pushing and then pulling.

Body Exercise.—This exercise develops and hardens the necessary body armament for ring contingencies. Sit on the floor and bend the trunk well forward, stretching the arms until the hands touch the toes, then bend the trunk backward and swing the legs up until they are directly over the head.

Rope Skipping.—This exericse brings into play every individual group of muscles, sharpens the wind, and develops speed. It is best to use a light piece of rope. Perform with snap various foot movements used when boxing.

Dummy Punching.—This exercise develops hitting powers. Step around the dummy just the same as when boxing. Perform with snap and precision various blows and moves used when boxing.

COMMANDS USED IN TEACHING BOXING

Attention—Midshipmen come to attention.
On Guard—Midshipmen execute the position of "ON GUARD."
Blows by Commands—(Pre Command) followed by the command "strike."
Blows by Counts—(Pre Command) followed by the command "strike", midshipmen execute the blow and hold position until the next count is called.
Moves by Commands—(Pre Command) followed by the command "step."
At Ease
At Rest
Dismissed
} Conforming to military procedure.

WRESTLING

WRESTLING

BY JOHN SCHUTZ

Wrestling Coach and Instructor, U. S. Naval Academy. Coach to Naval Olympic Wrestling Team, Olympic Games, Antwerp, 1920.

TEST "C"

Note: Rules to satisfaction of instructor.

The following holds are described as if taken from the left side of the opponent. They may also be taken from the right side, reversing holds accordingly:

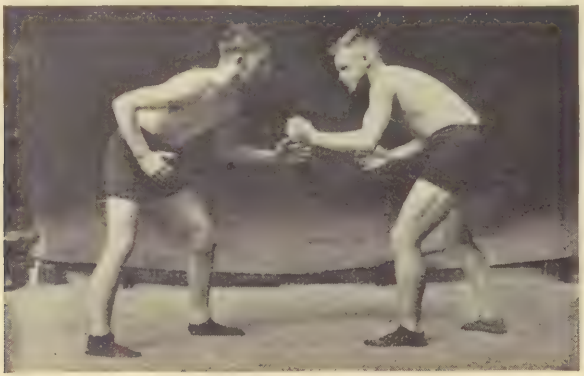

FIG. 201. Starting Position

348. Starting Position.—Stand with the feet astride, knees slightly bent, body leaning forward, upper arms close to the side, forearms to the mat, palms turned slightly upward, fingers straight and together and eyes directed toward opponent. Opponent stands in similar manner. (Fig. 201)

349. Referee's Hold.—Grasp back of opponent's neck with left hand and grasp his left upper arm with right hand, body inclined well forward, with top of head against opponent's shoulder. Opponent grasps you in similar manner. (Fig. 202)

350. First Hold Down.—To hold opponent down from his left side (opponent lying on his back) lie across opponent so that your chest rests on his chest, body at right angles to his, legs well spread out.

Pass the right arm around his neck so that his neck is between your right arm and your neck, the left arm passed under his right shoulder inside

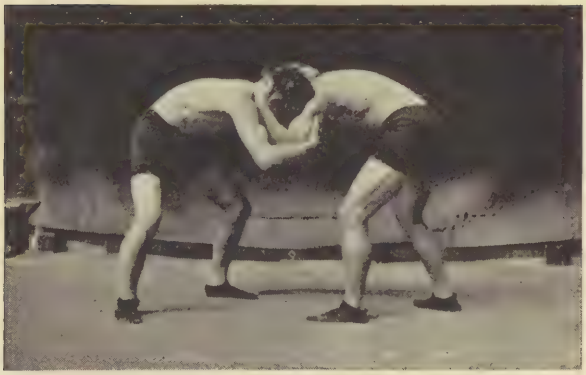

FIG. 202. Referee's Hold

FIG. 203. First Hold Down

FIG. 204. Second Hold Down

his right upper-arm, grasp your left fore-arm with your right hand and keep your head well down. As Fig. 203.

351. Second Hold Down.—Lie across opponent so that your chest rests on his chest and your body is at right-angles to his with legs well spread out. Pass the right arm the reverse way to No. 350, First Hold Down, around opponent's neck, the left arm passed as in No. 350, First Hold Down, the left hand gripping his right shoulder. As Fig. 204.

352. Defensive Position, on the Knees.—Down on both knees, with knees well spread, weight well back, hands on mat just in front of knees. (Fig. 205)

FIG. 205. Offensive and Defensive Positions

353. Offensive Position, on the Knees.—On left side of opponent, down on right knee, with knee close to opponent's left knee, left foot diagonally forward and well away from opponent's left hand, right arm around opponent's body just above the hips, left hand securing opponent's left upper-arm, placing weight of your body upon opponent's body. (Fig. 205)

354. Tackle or Double Leg Hold, from Referee's Hold.—Force opponent's left arm up, then lunge forward, securing both legs above the knees,

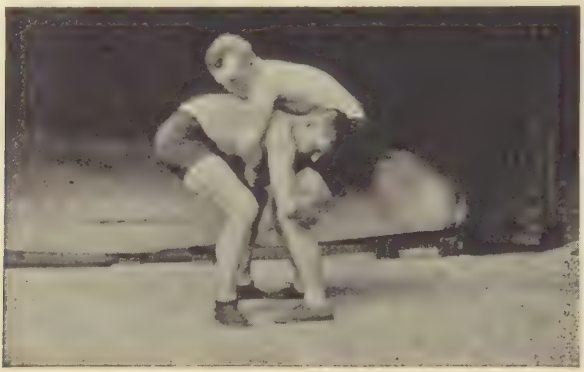

FIG. 206. Tackle or Double Leg Hold

keeping your head to the left of the opponent, back almost straight, both knees bent, feet well under body, then lift opponent and throw him to the mat, heaving him to the left, and secure No. 350, First Hold Down. (Fig. 206)

355. Guard for No. 354, Tackle or Double Leg Hold.—When opponent lunges forward, place both arms inside of his and force them outward, then spring back quickly into the No. 348, Starting Position.

356. Counter for No. 354, Tackle or Double Leg Hold.—When opponent lunges forward, place both arms over and around his body well up under the armpits, then throw both feet out and backward, keeping them well spread, arch your back, forcing all of your weight upon the back of his

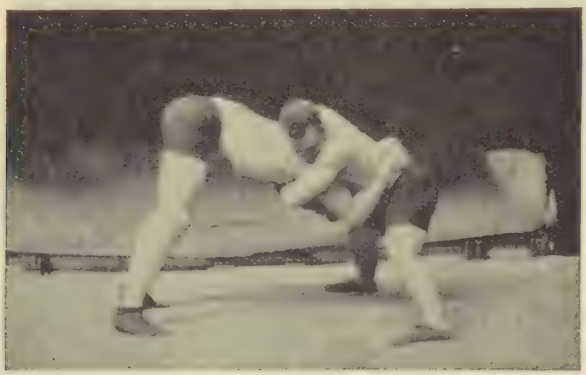

FIG. 207. Counter for Tackle or Double Leg Hold

neck and shoulders. This will bring him to the mat on his knees. Quickly change your position to No. 353, Offensive Position on Knees. (Fig. 207)

357. Arm and Leg Hold, from No. 349, Referee's Hold.—Slide the left hand down opponent's right arm, securing it at the elbow, face around quickly to the left, drop down on the right knee close to opponent's right foot, secure his right leg with your right arm, your head between his right arm and right leg, then drop on left knee, pulling opponent down head first, landing him on his back, duck your head from under his body as he falls and secure No. 350, First Hold Down. (Figs. 208 and 209.)

358. Guard for No. 357, Arm and Leg Hold.—As opponent drops on knee to secure arm and leg, force your left arm into his crotch, outside right arm and inside right leg, keeping your left arm straight, throwing both legs back and outward as in No. 356, Counter for Tackle or Double Leg Hold.

FIG. 208. Arm and Leg Hold, First Position

FIG. 209. Arm and Leg Hold, Second Position

FIG. 210. Counter for Arm and Leg Hold, First Position

359. Counter for No. 357, Arm and Leg Hold.—As opponent drops to knee, place your left hand in the small of his back, force your right arm in deep under his left arm for a bar, and force him over backward. At the same time secure a scissors on the right arm with both legs. After turning him over secure his left wrist with left hand and place your right hand on his left shoulder, applying scissors upon the right upperarm by twisting legs inward, thus putting pressure on his right shoulder. (Figs. 210 and 211.)

360. Side Chancery and Arm Hold, from No. 349, Referee's Hold.—Force opponent's head up, face right about, placing your left arm around his neck so that his head is between your left arm and body. Secure his left upper-arm with your right hand, your legs well spread with both knees bent, body inclined forward, your hips under his body. Pull opponent over your hips forcing him to the mat. Retain hold for Hold Down. (Figs. 212 and 213.)

FIG. 211. Counter for Arm and Leg Hold, Second Position

FIG. 212. Side Chancery and Arm Hold, First Position

FIG. 213. Side Chancery and Arm Hold, Second Position

361. Guard for No. 360, Side Chancery and Arm Hold.—As opponent faces about drop your right arm so that the fore-arm strikes his left side just above the hip, keeping him from completing his turn.

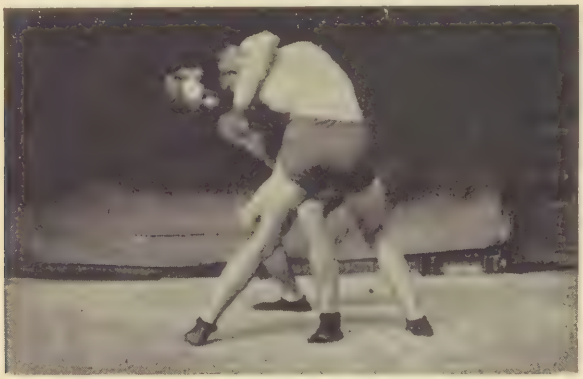

FIG. 214. Counter for Side Chancery and Arm Hold, First Position

362. Counter for No. 360, Side Chancery and Arm Hold.—As opponent faces right about and secures No. 360, Side Chancery and Arm Hold, step around quickly to the left front with your left foot, at the same time placing your right arm about his body, and dive landing on your left shoulder, carrying opponent with you, at the same time making a half-turn toward him. This will bring the opponent on his back. Apply No. 350, First Hold Down. (Figs. 214 and 215.)

363. Quarter-Nelson.—From No. **353**, Offensive Position, on the Knees, left side of opponent, place left hand on the back of his neck, right arm under his left arm, securing your left wrist. Turn opponent over on his back by keeping his head low and forcing upward on your right

arm, passing the right arm around the neck, swinging your body to right front. Secure No 350, First Hold Down, from opponent's left side. (Fig. 216.)

FIG. 215. Counter for Side Chancery and Arm Hold, Second Position

FIG. 216. Quarter-Nelson

364. Guard for No. 363, Quarter-Nelson.—As opponent is about to secure No. 363, Quarter-Nelson, turn your head away and come to a sitting position, bearing your weight on the left arm. This will block opponent effectively. (Fig. 217.)

FIG. 217. Guard for Quarter-Nelson

FIG. 218. Counter for Quarter-Nelson, First Position

FIG. 219. Counter for Quarter-Nelson, Second Position

FIG. 220. Counter for Quarter-Nelson, Third Position

365. Counter for No. 363, Quarter-Nelson.—When the opponent has secured No. 216, Quarter-Nelson, keep your head low, rise on the right foot, then roll forward head first and carry your opponent with you, making a sharp turn inward with the hips while in the air, coming down across his body. (Figs. 218, 219, 220.)

366. Near Half-Nelson and Further Wrist Hold.—From No. 353, Offensive Position, on the knees, left side of the opponent, force his head down with the right hand, place the left arm under his left arm with the left hand over and well around the back of his neck, then reach across over the body with the right hand, securing his right wrist from the inside back, force him over on his back by raising up on your left elbow. Retain hold for a Hold Down. (Fig. 221.)

FIG. 221. Near Half-Nelson

367. Guard for No. 366, Near Half-Nelson and Further Wrist Hold.—As opponent starts for Near Half-Nelson, drive your left arm in close to the body and throw your head well back.

368. Counter for No. 366, Near Half-Nelson and Further Wrist Hold. As opponent secures No. 366, Near Half-Nelson and Further Wrist Hold, come to a sitting position by bringing the left leg forward inward and the right leg forward outward, at the same time locking his left arm with your left arm, then pitch to the right on your right shoulder, roll right upon both knees, bringing your opponent on your right side, continue with a roll to the left, securing his left leg as he crosses your body, at the same time keeping a firm lock upon his left arm with your left arm. (Figs. 222, 223, 224 and 225.)

FIG. 222. Counter for Near Half-Nelson, First Position

FIG. 223. Counter for Near Half-Nelson, Second Position

369. Further Half-Nelson and Scissor Hold on Near Arm.—From No. 353, Offensive Position, on the knees, force opponent's head down and to the right with left hand, placing the right arm under his right arm with the hand over and well around the back of his neck. Secure scissors by swinging the left leg around his left arm, locking it with both legs well above the elbow, force his head to the right until you force him over on his shoulders. Retain hold for a Hold Down. (Figs. 226 and 227.)

FIG. 224. Counter for Near Half-Nelson, Third Position

FIG. 225. Counter for Near Half-Nelson, Third Position

FIG. 226. Further Half-Nelson and Scissor Hold On Near Arm, First Position

FIG. 227. Further Half-Nelson and Scissor Hold on Near Arm, Second Position

370. Guard for No. 369, Further Half-Nelson and Scissor Hold.—As opponent starts for No. 369, Further Half-Nelson Hold and Scissor, throw your head well back and force your right arm close to your side.

371. Counter for No. 369, Further Half-Nelson and Scissor Hold.—As opponent secures No. 369, Further Half-Nelson and Scissor Hold, lock his right arm with your right arm well above the elbow, roll to the right, carrying him over your body, securing his right leg with your left arm as you carry him over. Retain hold for a Hold Down. (Figs. 228 and 229.)

FIG. 228. Counter for Further Half-Nelson and Scissor Hold on Near Arm, First Position

FIG. 229. Counter for Further Half-Nelson and Scissor Hold, on Near Arm, Second Position

TEST "B"

372. Forward Chancery and Bar Hold, on the Feet.—From No. 349, Referee's Hold, force the opponent's head under your left arm, your right arm under his left arm and well over and around his body. Step backwards with your left foot and bear down on his head, forcing him over by rising up on your right arm and swinging him to the left. Retain hold for a Hold Down. (Figs. 230 and 231.)

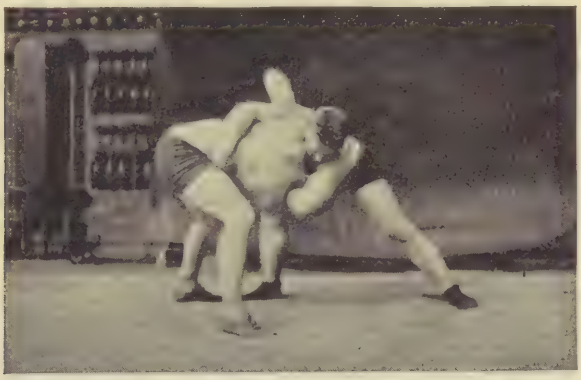

FIG. 230. Forward Chancery and Bar Hold

FIG. 231. Forward Chancery and Bar Hold, Second Position

373. Guard for No. 372, Forward Chancery and Bar Hold, on the Feet.—As opponent starts for No. 372, Forward Chancery and Bar Hold, on the Feet, secure his left wrist with your right hand and force your left arm in close to your side.

374. Counter for No. 372, Forward Chancery and Bar Hold, on the Feet.—When opponent has secured No. 372, Forward Chancery and Bar Hold, on the Feet, place your left arm over his right shoulder, your right arm in his crotch, lift him and throw him to the mat. Secure No. 350, First Hold Down. (Figs. 232, 233-234.)

FIG. 232. Counter for Forward Chancery and Bar Hold, First Position

FIG. 233. Counter for Forward Chancery and Bar Hold, Second Position

FIG. 234. Counter for Forward Chancery and Bar Hold, Third Position

375. Rear Waist Hold.—From No. 349, Referee's Hold, force opponent's left arm up with your right hand, swinging him right about, locking him with both arms around his waist just above his hips, lift him and throw him to the mat. (Figs. 235-236.)

FIG. 235. Rear Waist Hold, First Position

376. Guard for Rear Waist Hold.—As opponent starts to force your left arm up, step back quickly with your left foot, bearing your weight down on the left arm.

377. Counter for No. 375, Rear Waist Hold.—As your opponent passes around in back of you and before he can drop his left arm, lock it well above

FIG. 236. Rear Waist Hold, Second Position

the elbow with your left arm, and his left wrist with your right hand, place your left foot on the outside of his left foot, then pull down and to the right on his left arm and throw him across your left leg. Keep the left Arm Lock and try to secure Leg Lock or Body Hold with your right arm for a Hold Down. (Figs. 237-238.)

FIG. 237. Counter for Rear Waist Hold, First Position

FIG. 238. Counter for Rear Waist Hold, Second Position

378. Flying Mare, from No. 349, Referee's Hold.—Secure opponent's left forearm with your right hand, face right about, passing his left arm over your left shoulder, shoulder well in the armpit.

FIG. 239. Flying Mare, First Position

FIG. 240. Flying Mare, Second Position

Secure his left upper-arm with your left hand, dropping upon left knee, lean forward, rounding your back, pull down sharply on his arm and bring him to the mat. Apply No. 350, First Hold Down. (Figs. 239-240.)

379. Guard for No. 378, Flying Mare.—As opponent starts to face about, place your right hand on his left hip, pulling back at the same time on your left arm.

380. Counter for No. 378, Flying Mare.—As opponent faces about to complete the hold, force your left arm across his chest, place your right hand in the small of his back, your right foot in the hollow of his left knee, and force him over backward, securing No. 350, First Hold Down. (Fig. 241.)

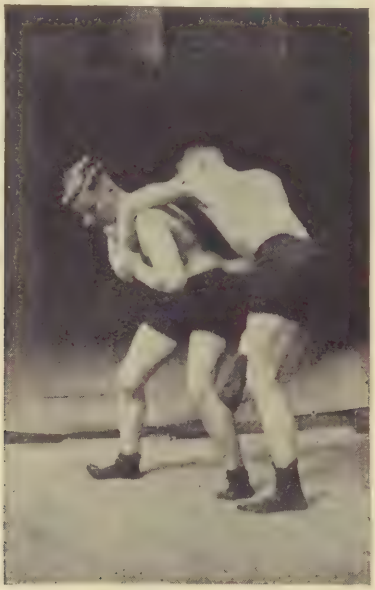

FIG. 241. Counter for Flying Mare

381. Further Arm Hold, from No. 353, Offensive Position, on the Knees.—Place the right hand on the opponent's right upper arm just above the elbow. Reach across with your left arm under his chin and in front of his left arm, securing his right arm just at the elbow, at the same time pushing against his body to break him down. Then reach under his body with your right arm in back of his left arm and secure his right shoulder; bring your right shoulder well under his body and pry him over on his back. Retain hold for hold down. (Figs. 242-243.)

FIG. 242. Further Arm Hold

FIG. 243. Further Arm Hold, Second Position

382. Guard for No. 381, Further Arm Hold.—As opponent secures No. 381, Further Arm Hold, swing your right foot forward and to the side, at the same time keeping your head low, and as he starts to pry you over, rise to your feet, keeping your body well forward and your feet well apart.

383. Counter for No. 381, Further Arm Hold.—As opponent reaches across the front with left arm secure it at the wrist with the right hand, and at the elbow with the left hand, pull his armpit well over your shoulder, then give a quick dive forward and to the right, carrying him over on his back. Apply No. 350, First Hold Down. (Figs. 244-245.)

FIG. 244. Counter for Further Arm Hold, First Position

FIG. 245. Counter for Further Arm Hold, Second Position

384. Hammer Lock and Crotch Hold, from No. 353, Offensive Position, on the Knees.—Secure opponent's left wrist with your left hand, placing top of your head against his left upperarm and at the same time pull back on the wrist, breaking down the arm.

Then force his left arm across his back, keeping it at right angles; change position of left hand to knuckles up, keep a firm hold on his left wrist with your left hand; reach back deep into his crotch with your right arm, then force him over forward on his shoulders. Retain hold for a Hold Down. (Figs. 246, 247, 248.)

FIG. 246. Hammer Lock and Crotch Hold, First Position. Also First Position for Counter

FIG. 247. Hammer Lock and Crotch Hold, Second Position

FIG. 248. Hammer Lock and Crotch Hold, Third Position

385. Guard for No. 384, Hammer Lock and Crotch Hold.—As opponent secures left wrist, stiffen your left arm and at the same time swing your right foot forward and to the side. This will block his move effectively.

386. Counter for No. 384, Hammer Lock and Crotch Hold.—As opponent secures Hammer Lock, drive forward, turning a somersault, turn the hips sharply to the right while in the air so as to land on top of opponent. (Figs. 249-250.)

387. Three-Quarter-Nelson, from No. 353, Offensive Position, on the Knees.—Secure No. 366, Near Half-Nelson, and complete Three-Quarter-Nelson by reaching under the opponent's chest with the right hand, placing it on your left hand. Force him over on his back, quickly shift the right arm under the opponent's right arm, taking the hold down from in front, retain hold for Hold Down.

388. Guard for No. 387, Three-Quarter-Nelson.—Same as No. 367, Guard for Near Half-Nelson.

FIG. 249. Counter for Hammer Lock and Crotch Hold, Second Position

FIG. 250. Counter for Hammer Lock and Crotch Hold, Third Position

FIG. 251. Three-Quarter-Nelson

FIG. 252. Three-Quarter-Nelson, Second Position

389. Counter for No. 387, Three-Quarter-Nelson.—As opponent secures No. 367, Near Half-Nelson, and before he completes Three-Quarter-Nelson, lock his left arm with your left and counter as in No. 368, Counter for Near Half-Nelson. (Figs. 222-223-224.)

TEST "A"

390. Hip Lock, from No. 349, Referee's Hold.—Place your left arm under the opponent's right arm and over the body; face right about quickly, your body inclined forward with your feet well apart and your hips directly under his body. Throw him across your hips to the mat, retaining arm and body lock.

FIG. 253. Hip Lock

391. Guard for No. 390, Hip Lock.—As opponent starts to face right about, place your right hand on his left hip, at the same time forcing down on your right arm.

392. Counter for No. 390, Hip Lock.—As opponent places his left arm under your right arm, face left about, circling your right arm over and around his neck; secure his right upper arm with your left hand, throwing him with No. 360, Side Chancery and Arm Hold.

FIG. 254. Hip Lock, Second Position

FIG. 255. Double Arm Lock and Back Heel, First Position

393. Double Arm Lock and Back Heel, from No. 349, Referee's Hold.—Lock the opponent's right arm between your body and left upper-arm, force your right arm over his left arm from inside, swinging it down and over, thus locking both arms under your left. Take a firm grasp on his left elbow with your right hand, make a quarter-turn to the right, placing your left foot in back of his left foot, bringing him to the mat by pulling down on his arms and tripping with your left foot. Retain hold for Hold Down. (Figs. 255-256.)

FIG. 256. Double Arm Lock and Back Heel, Second Position

394. Guard for No. 393, Double Arm Lock.—As opponent locks your right arm, step back with your left foot and place your left hand against his right shoulder, keeping him off.

FIG. 257. Half-Nelson and Body Hold

FIG. 258. Counter for Half-Nelson and Body Hold, First Position

395. Counter for No. 393, Double Arm Lock.—As opponent locks your right arm, force it in deep and across his back, using No. 390, Hip Lock, as your counter.

396. Half-Nelson and Body Hold, from No. 349, Referee's Hold.—Pass around in back of the opponent as in No. 375, Rear Waist Hold, at the same time passing your left arm under his left arm, securing No. 366, Half-Nelson. Pass the right arm around his body, lift him and throw him to the mat. Secure No. 351, Second Hold Down. (Fig. 204.)

397. Guard for No. 396, Half-Nelson and Body Hold.—Same as No. 376, Guard for Rear Waist Hold.

398. Counter for No. 396, Half-Nelson and Body Hold.—When the opponent has secured the No. 396, Half-Nelson and Body Hold, bend your body well forward, lock his left arm above the elbow with your left arm, dive forward, carrying him with you, making a sharp turn to the right with your hips while they are in the air, coming across his body. Apply No. 350, First Hold Down. (Figs. 258-259.)

399. Bar Hammer Lock and Further Half-Nelson, from No. 353, Offensive Position, on the Knees.—Secure Hammer Lock as in No. 348, Hammer Lock and Crotch Hold, then place the left arm through the Hammer Lock under the left forearm, placing the left hand on the left shoulder. Reach across and over the body with the right arm and secure No. 369, Further Half-Nelson. To throw him, force down on the Bar Hammer Lock and pry him over with the Half-Nelson. Retain hold for a Hold Down. (Fig. 260.)

FIG. 259. Counter for Half-Nelson and Body Hold, Second Position

400. Guard for No. 399, Bar Hammer Lock and Further Half-Nelson.—Same as No. 385, Guard for Hammer Lock.

FIG. 260. Bar Hammer Lock and Further Half-Nelson

401. Counter for No. 399, Bar Hammer Lock and Further Half-Nelson. —Same as No. 386. Counter for Hammer Lock.

402. Double Bar Hold, from No. 353, Offensive Position, on the Knees. —Shift around in front of the opponent, at the same time forcing your left arm under his right arm from the front across the back. Then force your right arm under his left arm from the front, securing your left wrist with your right hand; shift slightly to the left, forcing his head under your right arm. Pry him over by raising up on the left arm and forcing down on the head. Retain hold for a Hold Down. (Figs. 361-362.)

FIG. 261. Double Bar Hold, First Position

FIG. 262. Double Bar Hold, Second Position

403. Guard for No. 402, Double Bar Hold.—As opponent starts for Double Bar Hold, force your arms in close to the sides.

404. Counter for No. 402, Double Bar Hold.—Keep your opponent straight in front of you with your head under his chest; secure his elbows with both hands and roll to the left or right, carrying him with you. Your opponent will be on his back with your back to his chest. See that your feet are well apart. Retain hold for a Hold Down. (Figs. 263-264.)

FIG. 263. Counter for Double Bar Hold, First Position

FIG. 264. Counter for Double Bar Hold, First Position

405. Half-Nelson from the Front.—After shifting to the front as in No. 402, Double Bar Hold, place your left hand on the back of the opponent's head, forcing it down and toward his left arm; place your right arm under his left arm from the back, with the hand well around and over the back of his neck, palm up. Keep forcing down the head and prying up on the right arm forcing him over on his back. Apply No. 350, First Hold Down. (Fig. 350.)

FIG. 265. Half-Nelson from the Front

406. Guard for No. 405, Half-Nelson from the Front.—As opponent secures No. 405, Half-Nelson from the Front, drop flat on your breast, turn your head to the right and force your left arm into your side.

FIG. 266. Counter for Half-Nelson from the Front, First Position

407. Counter for No. 405, Half-Nelson from the Front.—When the opponent has secured No. 405, Half-Nelson from the Front, lock his right arm above the elbow with your left arm, at the same time securing his left wrist with your right hand. Come to a sitting position, force him over head first by falling backward to the left, pulling down on his right arm. After rolling him over, let go of his right wrist and turn quickly to the right and apply No. 350, First Hold Down. (Figs. 266-267.)

FIG. 267. Counter for Half-Nelson from the Front, Second Position

WRESTLING AS A SPORT

408. Government.—Amateur wrestling meets are usually governed by the rules of the following organizations:

1. Intercollegiate Wrestling Association,
2. Amateur Athletic Union.

409. The Varsity Team.—Composed of a member for each weight, or seven in all. In addition, 5 men are carried for each weight, making a total of 42 men on the entire Varsity Squad.

410. B-Squad.—This is an auxiliary squad to the Varsity Squad. It is usually composed of 65 members.

411. Class Teams.—Class teams are organized similar to varsity squad.

412. Captain of Varsity Team.—At the close of the wrestling season members of the wrestling team entitled to wear the "N" or letters, shall elect by a majority vote a captain for the ensuing year, subject to the approval of the Commandant of Midshipmen. The manager receives office in accordance with paragraph 1128.

413. Members of the Team.—All members of the Varsity Wrestling team and squad are selected from results in competitive wrestling. To become a member of the wrestling team a member of the Varsity Squad must defeat a man on the team in two successive bouts within one week. This method of obtaining a position on the Varsity Team is used throughout the season.

414. Training Table.—All members of the training table are selected from results in competitive wrestling. Members of class teams, when recommended by coaches of their class teams, may try out for the Varsity or B-Squad every Tuesday. In order to replace a member of the squad he must first defeat his opponent in two successive bouts within one week.

415. Events for Intercollegiate Meets and Dual Meets.—

115 pound class.
125 pound class.
135 pound class.
145 pound class.
158 pound class.
175 pound class.
Heavyweight class.

416. Weight Allowance.—In dual Meets there is an allowance of three pounds overweight. In Championship Meets there is no allowance on the first day of the meet, but an allowance of one pound is made for the following day.

417. Standard Type of Mat.—The wrestling mat is made of felt with canvas cover, and is at least 16 feet square, and 2 inches thick. Over this matting a heavy carpet is spread.

418. Care of Wrestling Mat.—The mats are to be frequently cleaned and the carpet should be sprinkled each day with a solution of 4% formaldehyde.

419. Equipment of Team.—Full length tights with knee pads, leotards, shoes with rubber sole, inside jockey strap, and outside jockey strap. Midshipmen entitled to wear letters for wrestling are entitled to wear these letters on the leotards furnished them.

420. Terms Used in Wrestling.—Referee's position: The position assumed by the two contestants, i. e., left hand securing the back of the opponent's neck, the right hand securing the opponent's left upper arm and the top of the head is placed against the opponent's left shoulder, body well inclined forward, the opponent assuming the same position. (Fig. 218.) Flying Fall: Flying falls are allowed under A. A. U. rules, but not under Intercollegiate rules. In a Flying Fall, a man is thrown to the mat from his feet, landing upon both shoulders at the same time, his opponent having him locked with at least one arm. Pin Fall: Both shoulders of the opponent pinned to the mat for three seconds. Top Side: When one of the contestants gains the advantage when they have gone to their knees, the one having the offensive position, being Top Side. Decision: A decision is gained by the contestant having done the most aggressive work throughout the bout (A. A. U. Ruling). In Intercollegiate wrestling a decision is awarded to the contestant having gained at least 60 seconds Top Side over his opponent's time.

421. Duration of Bout.—In dual meets the time of a bout is nine minutes; in case of no decision at the end of nine minutes after a rest of at

least three minutes, an extra period of six minutes shall be wrestled the contestants starting on their knees the offensive and defensive positions being decided by the toss of a coin; at the end of three minutes of wrestling the positions are reversed, the one having had the offensive position first shall now take the defensive position and the bout continues for the remaining three minutes. Should a fall be secured in the first three minutes, this will terminate the first half of the extra period, and the second half begins immediately. Should the other contestant also secure a fall, the bout shall go to the one having secured his fall in the shortest time. If neither contestant secures a fall, the bout shall go to the one having the most time Top Side. In Intercollegiate Championship Meets the duration of the bout is 15 minutes, instead of 9 minutes as in Dual Meets.

422. Officials.—There shall be one referee and three time keepers, one time keeper timing the duration of the bout, one keeping time of Top Side for the one contestant, and the third timer keeping time of Top Side for the other contestant.

WRESTLING IN GENERAL

423. History of Wrestling.—Wrestling is the oldest and most natural form of exercise known to mankind. It began with the advent of man, for, he wrestled not only with his own kind, but with the wild beasts that chanced to cross his path. Wrestling first as a means of self defense, passed down through the ages, and with the development of weapons for defense, it soon became one of the most popular of sports. The Egyptians, Greeks, Romans, Chinese, Japanese, in fact all races, developed this both as a means of defense and as a sport. Wrestling held an important place in the Homeric Games. In the wrestling games of Patroclus the competitors were Odysseus and Ajax, the types representing cleverness and strength. It is stated that "Each clasped the other in his arms with stalwart hands like gable rafters of a lofty house." After two inconclusive falls Achilles apparently acting as referee, stopped the contest and gave each an equal prize.

In the early days of wrestling an opponent was tumbled and thrown around until he cried enough. From this it developed into a cleaner sport and today is the leading indoor sport of the colleges.

424. Wrestling at Naval Academy.—In 1909 wrestling was organized as a Varsity Sport, the first meet being with University of Pennsylvania, which was won by Navy 5-2.

425. Different Styles of Wrestling.—There are several chief styles of wrestling, for example:

Catch-as-catch-can (once known as Lancashire).

Cornwall and Devonshire.
Cumberland and Westmoreland.
Collar and Elbow.
Back Hold.
Graeco-Roman.

Of the above, Catch-as-catch-can is the most popular, followed by Graeco-Roman.

The reason that Catch-as-catch-can has come to the fore is that it is more varied in its action, it affords greater scope for activity and is infinitely more interesting from the viewpoint of the spectators. Today Intercollegiate wrestling is one of the cleanest of sports. It is next to impossible to make a mistake in picking the actual winner. The opponent must be beaten by his contestant's skill, and is not forced to quit, due to the pressure of a bone-breaking hold; all bone-breaking holds being barred.

426. Bone-Breaking Holds. —The Strangle Hold, Hammer Lock (when used above a right angle), Toe Hold of any kind Full Nelson, etc., are termed bone-breaking, and jeopardize the life or limbs of contestants. These holds are barred from amateur wrestling.

COACHING WRESTLING

427. Calling for Candidates.—Prior to the coach calling for candidates he should have a very definite plan arranged for the season. The first evening should be devoted to a very sincere talk. The subject of this talk should be on wrestling as a means of physical development, and as a clean and manly sport. Also outline clearly the system of elimination to be used throughout the season.

428. Second Evening.—Get the squad started by giving them a very light work-out, finishing up the evening's work with a light jog out of doors if the weather permits. See that the men wear extra clothing when going out to prevent catching cold.

429. The First Week.—Continue this same light work throughout the first week.

430. Second Week.—Let the men go on for regular bouts, not longer than five minutes.

431. Third Week.—Increase the time of bouts to seven minutes during this period.

432. For the Rest of the Season.—Following the gradual lengthening of bouts previously given, bouts may now be safely contested for nine minutes.

433. Eliminations.—Begin your eliminations for the Varsity squad about three weeks before starting the training table. Have the men understand that their positions on the Varsity squad are not permanent; that they will have to fight throughout the season to retain their positions, and that the place is to the best man regardless of favor.

434. Former Members of Team.—All members of previous year's team or squad return at the opening of the season with exactly the same status as the new candidates, and no favor is shown. This method is appreciated by all, since it establishes the fact that positions are held by merit and not by favor.

435. Routine of Work.—Monday: Have the men work out holds from a standing position; continue the struggle until one or the other has secured "Top Side" then begin over again. With plenty of mat space you can work two or three pairs at the same time. Give them about five minutes of this kind of work. Watch the work very carefully and when a man has failed to bring his opponent to the mat with a certain hold, explain why he failed, and demonstrate the proper way of executing the hold. THIS IS VERY IMPORTANT. See that every man of the squad is paying close attention to this work. When the first pair are finished, have them sit down and watch the work of the others. After this work is completed have the next men ready, and so on.

Tuesday: Regular bouts of nine minutes. Demand lots of speed throughout the bouts. In case there is no decision have them go the extra period.

Wednesday: Work out from underneath to gain top side. When the defensive man has gained "Top Side" stop the bout and place him on the defensive again, continue this practice for about five minutes. After going through the whole squad, start with the first pair again, placing the man on the defensive who had the offensive position in the first period. Watch this work very closely. Keep contestants trying out new methods for getting out from underneath. See that the men sitting around are attentive. Offensive men should not be neglected. Show them the different ways of holding the under man down.

Thursday: Same as Tuesday.

Friday: Have the squad work out from the different hold downs on their backs. About four minutes of this work is sufficient.

436. Strategy of Wrestling.—There are two distinct ways of getting your opponent.—1. Bore right in on your man at the very instant of starting and get your hold. 2. Decoy your man into thinking that you are going for a certain hold, and in this way make him open up for the hold that

you intend throwing him with. Watch your man very carefully and when you find him slightly off balance, knock his "props" from under him, and bring him down for a fall.

437. Making Weight.—See that every man receives a good rubdown after every workout. Have the man within five or six pounds of the class weight. Begin taking off weight Wednesday evening, taking the last two or three pounds off Friday evening, weighing the class weight or a trifle under.

438. A Few Precautions for the Coach.—Avoid favorites. Never overlook new material in the fourth class, for they are the nucleus for next year's team. Do not show your men how much you know. Your men should never be permitted to become over-confident. Give the opponent's credit for having a strong team. Make your team prove that they are a better team than opponents by winning their meet.

LACROSSE

LACROSSE

BY TOM G. TAYLOR

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TEST "C"

Note: Rules to satisfaction of instructor.

439. Handling Lacrosse Stick.—Grasp the butt firmly in the left hand, held flexibly at the crotch with the right hand. Stand in a natural relaxed position, weight evenly balanced.

FIG. 269. Ball in Stick, First Position

440. Passing the Ball.—The ball is kept at all times about a foot from the broad end of the stick. In passing let your arms have a free movement. Draw the stick well over right shoulder, turning your body to accompany this movement, then bring the stick forward in a nearly perpendicular position, and let the ball pass out near the corner of the stick adjacent to the high side of the frame. As the ball leaves the stick, give the stick a

slight jerk backward. This jerk accelerates the speed. Just as the ball leaves the net, draw the butt of the stick slightly in toward your body. In the pass the muscles of the back should come into play, and a step forward with the leg on opposite side of throw should be taken.

FIG. 270. Passing—Defensive

FIG. 271. Sling Pass—Across Body

FIG. 272. Straight Throw

FIG. 273. Position After Delivery

441. Picking up the Ball.—Approach the ball at any speed, and when near enough to get the ball under full control, bend over naturally, with a slight bend in the knees, and scoop up the ball. When the ball enters the stick it should be for the position of the pass. The movements are as follows: A quick bend, a scoop, the cradle motion. In bending for the ball the stick should be in position to pass the body in the event of striking some unevenness or another player's stick. This prevents the stick being driven into the abdomen. It is very important that the stick be gripped firmly with both hands if an opponent is after the ball.

442. The Approach to the Ball.—Go straight to the ball without circling.

443. The Short Pass.—This pass should be made while in motion in a direction and at any speed. It should be short, snappy, and to a given position. All passes should be made in anticipation of where team mates next position will be.

444. The Long Pass.—This pass is made nearly on a straight line to the player who is to receive it. The pass should be as flat as possible to permit receiving while receiver is in motion.

FIG. 274. Picking Up Ball, on Right Side

FIG. 275. Form for Picking Up the Ball

FIG. 276. The Shovel Pass

445. Checking a Stick.—This is done by striking, pushing aside or lifting an opponent's stick to prevent him using it for the time being. This is done with the stick. Of the different checks, the **lift up** or "check up" is the most efficient. This method does not come naturally, and must be developed.

446. Check with Feet.—If outnumbered or alone the ball should be kicked away, while the checking of opponents is done with stick. In missing a scoop with the stick it is often expedient to use the feet in driving the ball away from a near opponent.

447. Dodging.—The first step in dodging is to make an opponent hit at your stick. When he does this very little effort is required to pass around him. As he hits your stick draw yourself away quickly, allowing the opponent who expected resistance, to practically lose his balance. In dodging the stick should be carried low to protect the ribs. Methods of dodging are grouped as follows:

FIG. 277. Swerving

(1) Make opponent hit at your stick in rushing at you, drawing away as he attempts to do so.

(2) Toss the ball over opponent's shoulder, this draws his attention to that side, while you pass around on the other side and recover the ball.

(3) Roll or bounce the ball on one side, passing on the opposite and recovering ball behind him.

(4) Approach at moderate pace, make a slight fake to one side, and turn quickly, run close around him on the opposite side.

The above dodges depend upon the quickness of their execution.

448. Body Checking.—When an opponent has arrived within six feet of the ball, and you desire to use the body-check, give him a football check. This method of checking will be certain to block him.

FIG. 278. Blocking and Picking Up

449. Checking an Opponent's Stick.—When paired off against an attack man, determine whether he shoots from right or left side. Shots cannot be made easily from the opposite side unless the stick is changed to the other hand. In covering an attack always stand on the side from which the ball must be shot. In checking the ball as it leaves an opponent's stick, cover the spot where the ball passes out of his, with your stick. In doing this place your stick in position so that when the sticks come together, should one slide down the other, your stick comes on the inside.

450. The Line-Up.—Twelve men comprise a lacrosse team, in following positions (showing opponent's positions):

	Goal-Keeper.
In Home.	Point.
Out Home.	Cover-point.
First Attack.	First Defense.
Second Attack.	Second Defense.
Third Attack.	Third Defense.

FIG. 279. Checking Down a Pass

FIG. 280. Checking Up from Behind

FIG. 281. Spoiling a Shot

Center.	Center.
Third Defense.	Third Attack.
Second Defense.	Second Attack.
First Defense.	First Attack.
Cover-Point.	Out Home.
Point.	In Home.
Goal-Keeper.	

Teams line up as shown above; the player's left side always toward the goal he is attacking.

451. Position for Face-Off.—The ball starts in play from centre, or the "Face-Off." The two opposing centers place their sticks back to back on the ground, the ball being placed between them. To begin the game each center draws his stick straight toward himself, and the ball becomes the property of the side getting it.

TEST "B"

452. Attack Play (Offensive).—In the offensive the attack makes the move, while the defense tries to check this move. In playing on the attack, if your team mate is advancing the ball toward you from the right side of the center line, you usually withdraw to the left, and vice versa. Draw off to the opposite side from which the ball is being advanced.

FIG. 282. Face Off, Right Hand

FIG. 283. Face Off, Left Handed Man

453. Passing the Ball in Play.—In passing the ball from player to player an attack player should not pass too soon, as this gives a defense man a chance to intercept the ball. Sprint or break, so as to lose the man guarding you, and by advancing you are ready for a return pass.

454. Position when Uncovered.—When uncovered, do not take a position so as to place the defense in a direct line between yourself and the

player who is about to pass to you. Proper position should be so that ball may be passed on either side of the defense man. You cannot have a man standing still nor create opening.

455. Rule of Attack.—The system of drawing off to one side or the other is the fundamental rule of the attack system. The players should never stand still during the game. A player carrying the ball should always plunge hard when going to the goal.

456. Shooting Goals.—In shooting the ball for a goal it should be shot accurately and hard. If the ball is shot for the middle of the goal it is very apt to hit the goal keeper. The vital spots for scoring are along the sides and top of goal. A swift ball on a line with goal keeper's waist or head is the most difficult for goal keeper to stop.

457. The Defense System.—Fundamentals of defense are: Keep opponents covered player for player, keep them as far from the goal as possible, and do not permit them to get a shot at goal, at least never unmolested. Never permit the attack to get between you and the goal.

458. Stopping an Attack Player.—The most satisfactory method of stopping an attack player advancing toward the goal is to take up a position directly in front of him. When the ball has passed you immediately start for the goal.

FIG. 284. Stopping a Dodger

459. Coaching from Behind.—In covering the attack, player for player, it is necessary for the defense players to coach the player ahead of him.

460. Stopping a Dodger.—When meeting a man, move quickly until you are within about fifteen feet of him, then slow down or stop and wait for his next move. In this case watch the man. Take his body, the ball will take care of itself. The dodger will invariably get by if you do not put your body across his before you strike at his stick.

461. Point Position.—This position is nearly on the crease line. The object of this player is to make an attack shoot out as far as possible.

462. Cover Point Position.—Object is to aid the point man, and the work of these two positions is divided evenly.

TEST "A"

463. Officiating. Field Captains.—Field captains are appointed previous to the commencement of a match. They are playing members and they alone shall be representatives of their respective teams in all disputes. They toss for choice of goals, and none other than either of the Field Captains, or the Referee, shall be allowed to claim "foul" during a match. The Field Captain reports infringements of rules during a match to the Referee. The Feld Captains also define the bounds of the playing field and report this to the Referee. If during the match either Umpire gives unjust decisions the Field Captains may protest to the Referee, and ask for his removal and the reversal of the Umpire's decision. Field Captains are under the authority of the Referee.

464. Referee.—The authority of the Referee commences from the time of his appointment, and continues to the end of the match. The Referee has authority to dismiss either Umpire. The Referee may call "time" after which the ball must not be touched by the players, nor moved from its position until the Referee has again started the play. The Referee decides on fouls. At the commencement of each half, and after "fouls" and "ball out of bounds" the Referee shall see that the ball is properly faced. The Referee may exclude an offender for coaching during a match. Before the game begins the Referee draws the players up in lines and sees that the regulations respecting the ball, crosses and shoes are complied with. Also for disputed points.

465. Umpires.—There are two umpires, one at each goal. They do not change goals during the game, and must stand behind the goals. The Umpires decide on goals. An umpire's decision shall be "goal" or "no goal" without comment of any kind.

466. Time Keepers.—There are two time keepers, appointed one by each of the Field Captains. Time keepers are charged with keeping time of each half, intermission, deducting time of stoppages in actual play from injuries, ball out of bounds, disputes, etc. Also a record of time lost between goals. They must report to Referee any variance in time, and the matter shall at once be decided by him.

LACROSSE AS A SPORT

467. History.—Originated by the Vikings, lacrosse is perhaps one of the most ancient of present day games. The Vikings landed in America over 900 years ago, bringing their national game with them. In playing Lacrosse they taught it to the Indians, and the game as played by the Indians today is very similar to the original game of the Norsemen. The Indians took up the game and played it on down through time, eventually teaching the white men who colonized in Canada. Lacrosse is now the national game of Canada, and is played with considerable interest in America and England.

468. Organization at Naval Academy.—In 1907 Lacrosse was first taken up as a Varsity Sport. It ranks as the 9th sport in order of sports, and is the 5th minor sport. While the Naval Academy is not a member of the United States Inter-Collegiate Lacrosse League, games are usually scheduled with members of this league, composed of Cornell, Harvard, Johns Hopkins, Lehigh, Swarthmore, Yale.

469. Rules.—The Inter-Collegiate Organization plays under rules known as the American Lacrosse Rules. These rules are very similar to the rules used in Canada and other countries.

RIFLE

THE RIFLE AS A SPORT

BY LIEUT.-COMMANDER F. A. L. VOSSLER
U. S. Navy, Coach of Navy Rifle Team
(*Notes by Instructor F. L. Foster, formerly of U. S. Marine Corps.*)

470. Organization at Naval Academy.—Instruction in the use of the rifle is given under Ordnance, and therefore is not a requirement in Physical Training. The following brief account is to cover the rifle as a sport for meets conducted under this department, and to aid young coaches in training rifle teams for sport.

471. Early Competitions.—In 1908 the Naval Academy sent its first team to Camp Perry. The result was most gratifying, the team taking sixth place out of about 48 teams. In this first meet the military championship was won by Midshipman H. T. Smith. In the National Pistol match Midshipman W. A. Lee won first place. Since this first match the Naval Academy teams have been well organized and take part in the National Matches at every opportunity.

472. The Rifle Team.—To the inexperienced person, the term *Team*, when used in connection with a military rifleman, seems a misnomer, the fact is that in no sport is there greater necessity for "*Team work*" than there is in rifle shooting when the competition is between teams. Briefly, "Team work" in rifle shooting means that every individual on the team must be ready and willing at all times in practice as well as during a Match, to sacrifice his own individual score, if need be, to increase the team aggregate. Every individual who is on the squad must do his utmost to develop a winning team, and to this end he must be willing to subordinate his own personal inclinations, if by so doing he can help the team. The Midshipman who goes out for the Naval Academy Rifle Team should first and foremost get the idea that he is just as much responsible for his shooting partner's score as he is for his own score, be it good or bad. The number of men on a rifle team ranges anywhere from four to twenty. The usual number representing the various branches of the National services in the big matches is twelve. At the Naval Academy the teams are made up of twelve firers and three substitutes in order to give as many midshipmen as possible experience in matches with outside teams. The complete team, however, consists of a team manager, a team captain, a coach, twelve firers and three substitutes. The Coach is usually a Commissioned

Officer, while at the Naval Academy all other members of the team are midshipmen. It is also customary here for the team Captain to be one of the firers. In the National Matches, however, the team captain performs the duties of manager, and does not fire on the team. In other words the title of "Manager" does not appear in the make up at a National Match team.

473. Status of Rifle as a Sport.—Team rifle shooting is now one of the branches of outdoor sport permanently established at the Naval Academy and is conducted under the supervision of the Athletic Officer. While every midshipman is required to do a certain amount of individual firing on the range as a part of his practical instruction during his Academic course, all *team* shooting is taken up outside of the regular requirements.

474. Team to National Matches.—A rifle team may be made up of any number from four, as in company matches, to twenty, the number of individuals making up the United Service teams in the National Matches. However, the usual number is twelve at the Naval Academy, with three substitutes, a team Captain (usually one of the firers, though preferably he should not shoot on the team) and a manager. The coach should be a Commissioned Officer who has had experience as a team rifleman.

475. Rifle Organizations.—There are scores of rifle organizations throughout the country. The largest one however, is the National Rifle Association with thousands of members which conducts its Annual Competitions just prior to the National Rifle and Pistol Matches. The N. R. A. Matches consist of practically every sort of competition with the rifle and pistol, for both the individual and the team. The most important N. R. A competition for the individual is the President's Match, the winner of which receives a Gold Medal, and a letter from the President of the United States. The number of entries in this match usually runs into the thousands and the National Team Matches are the most important rifle competitions held in the United States and are conducted under the auspices of the U. S. War Department, the latter receiving an appropriation each year from Congress to defray the expenses of the Match. The primary object of training a Midshipmen's Rifle Team during the summer each year is its entry into the National Team Match, ordinarily held at Camp Perry, Ohio, (near Toledo) during the latter part of August. This year (1921) for the first time there also will be an inter-collegiate rifle team match at Camp Perry sometime previous to the National Matches. It is probable that the Military Academy will send a team to the National Matches in 1922, thus enabling the two National Academies to compete in this branch of sport.

476. Equipment.—Each competitor on the team is permitted to use the following equipment in team matches:

(a) Rifle, Belt and Ammunition.
(b) Telescope
(c) Vernier for setting sights.
(d) Score Book.
(e) Shooting spectacles (usually colored in order to prevent ill effects from varying light).
(f) Shooting bag for conveying small articles of equipment.

The Coach is also allowed to use a high power telescope or binoculars behind the firing line of his team.

477. Distances and Targets.—In team shooting, the distances fired at are similar to those in individual competitions. However, as a rule, the slow fire includes short range (200 and 300 yards), Midrange (500 to 600 yards) and long range (800 to 1000 yards) firing. Rapid fire always constitutes a part of the course, as a rule this is done at the short ranges, that is at 200 or 300 yards. The target used in *slow fire* at the short ranges is the "A" target—10 inch bullseye; at the midranges, the "B" target—20 inch bull's eye; and at the long ranges, the "C" target—36 inch bull's eye. In rapid fire, the "D" target, that is the prone silhouette, is used as a rule, though not infrequently the "B" is designated.

478. Positions of Firing.—In the slow fire stages, the positions do not vary much from year to year for the National Matches. However, the National Board for the Promotion of Rifle Practice, decides each year (usually at a meeting in January) what the distances, targets, positions, etc., will be for that particular year. At 200 yards slow fire the position is standing; at 300 to 500 yards, kneeling or sitting; and at the longer ranges, prone. In rapid fire it is customary to kneel or sit from the standing position at 200 yards and prone from standing at 300 yards. In team match shooting, no artificial rest at any range, is permitted.

479. Terms Used in Matches (Meets).—The vocabulary used in Rifle Competitions is generally the same as those used on all rifle ranges under military supervision.

480. Scoring.—The usual method of scoring is to count a bullseye as 5, inner ring as 4, outer ring as 3 (sometimes called a magpie) and other hits as 2. The aggregate of the sums of the various shots from a competitor are his score, the highest possible being, for a ten shot match, 50. In event of two or more competitors scoring a "possible" they continue firing until each one fails to make a bullseye. The one making the greatest number of bullseyes, exclusive of his sighting shots (if allowed) winning the match.

In the event of other competitors making a tie score without making 50, the best score is considered that one which has the highest value counting from the last shot backward; thus of the three scores below:

1	2	3	4	5	6	7	8	9	10	TOTAL
5	5	3	5	4	5	5	5	5	5	47
5	5	5	5	5	5	4	5	5	3	47
4	4	4	5	5	5	5	5	5	5	47

the last one wins, number 1 is second.

In a match a scorer is provided for each firing point, who as a competitor fires, announces the name, number of shot, and value of shot as he records it. There is also a score kept at the target and referred to in case of dispute. A range officer is usually in charge of several firing points, and all questions are referred for his decision. If the competitor is dissatisfied with a range officer's decision over the value of a shot, he may "challenge" the shot, by announcing that he does so and by making a deposit usually one dollar. When he does so the Chief Pit Officer examines the target in company with the target officer in charge of the group in which the disputed target is. If the challenge is substantiated, the forfeit is returned. At the end of the match all scores are turned in by the scorers to the statistical officer where they are arranged according to their value and posted.

481. Methods of Firing.—In all team matches, as well as in practice, the competitors shoot in pairs. That is, shooting partners of the same team occupy one firing point, and shoot at the same target, firing alternately—the man on the right hand firing first, then his partner on the left. There are various positions and methods used in rifle practice, the conditions of each match indicate the positions and methods of firing. Generally at all ranges greater than three hundred yards the position is prone, the rifleman lying down with head toward the target. Unless otherwise specified the sling is used to assist in steadying the piece. At three hundred yards and shorter ranges the position may be prone, sitting, kneeling, or the so-called "off-hand" or standing position, all these positions may or may not include the use of the sling depending on the conditions of the particular match.

482. Precautions.—Fatal accidents are the result of a small amount of carelessness in the handling of the service arm. A rifleman must con-

stantly guard against the negligence that usually creeps on him after he has been handling a rifle and shooting any length of time. If he obeys the two main precautionary rules he will probably minimize his chances of having an involuntary discharge of his weapon.

These are:

1. Never point a gun at any living object unless it is desired to shoot it.
2. Never have the bolt closed except when actually on the firing line, and facing the target.

483. Care of the Rifle.—To be an accurate weapon the rifle should be guarded against abuse, such as is indicated:

1. Failing to clean the bore.
2. Cleaning from the muzzle.
3. Allowing it to fall thus striking the sights.
4. Failure to keep mechanism oiled and clean.

Other details of interest to a prospective rifleman are found in the Navy Landing Force Instructions, and the U. S. Navy Small Arms Firing Regulations for the current year.

FENCING

FENCING

BY GEORGE HEINTZ

Swordsmaster, U. S. Naval Academy, Coach to Navy Olympic Team, Olympic Games, Antwerp, 1920.

SMALL SWORD

TEST "C"

484. Sword Exercise.—On command Sword Exercise, half face to the left, feet at right-angles, the right toe pointing straight to the front, the left toe to the left, left heel immediately behind the right, at the same time raise the sword with the right hand to the right front, the arm extended, the hand the height of the eyes, the sword in prolongation of the arm.

FIG. 285. Small Sword, Position of Sword Exercise

FIG. 285a. Small Sword, Side View of Sword Exercise. First Position.

485. Position of Guard.—The Guard is six counts: 1st Position: Take position of Sword Exercise. 2d Position: Pass sword to the left, turn-

ing the hand in Tierce and opposite to the left hip, place the back of the left hand on the blade, the fingers toward and close to the Guard. Back of left hand turned down. 3d Position: Elevate both arms above the head, keeping the hands in the same position. 4th Position: Separate the hands, carrying the right hand forward, the hilt the height of the chest, point of sword 3 inches Higher sword, arm slightly bent, elbow 6 inches from the body, in line with the right or left hip, the left arm to the rear and curved. 5th Position: Bend both knees, the body well balanced on the hips. 6th Position: Advance the right foot in a straight line 16 to 18 inches, keeping the feet at right angles.

FIG. 286. Small Sword, Position of Guard

Note: Assume an easy position, the body erect and firm on the hips, without stiffness.

486. Lines of Quarte and Sixte.—The space of the body to the left of the sword is the line of Quarte. The space to the right of the sword is the line of Sixte.

487. Advance and Retire.—To advance from the position of Guard, carry the right foot 8 inches straight to the front, and bring the left foot forward an equal distance. Keep the feet in the same relative position, without deranging the position of the body or sword.

To retire from the position of Guard, step back 8 inches with the left foot and follow immediately with the right the same distance. Keep the body, feet and sword in the same position as in the advance.

SIMPLE PARRIES AND ATTACKS

488. Quarte Parry.—The Quarte Parry is a shift of the blade in a parallel line of 4 to 5 inches to the left, catching the opponent's blade at the foible with the fort (or strong part) of your blade, causing the opponent's blade to glide past the left side of the body.

489. Sixte Parry.—The Sixte Parry is executed in the same manner as the Quarte, except that the shift is to the right.

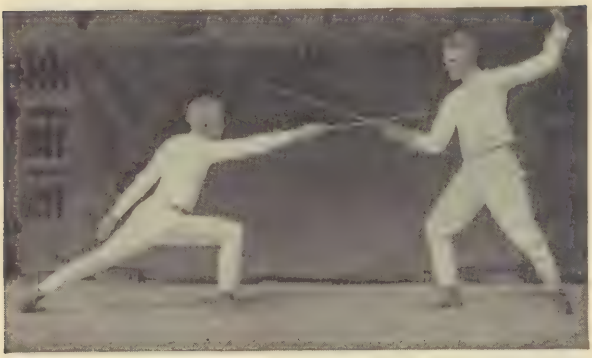

FIG. 287. Small Sword Thrust and Parry in High Line of Quarte

490-491. Low Quarte.—The Low Quarte, from the position of Guard in Line of Quarte, describe a half-circle with the point of the foil from right to left low; keeping the hand in Quarte, the point of the sword 8 to 10 inches lower, turning the opponent's attack to the left low.

492. Low Sixte.—From the position of Guard in the Line of Sixte, describe a half-circle with the point of the foil from left to right low, keeping the hand in Sixte, the point of the sword 8 to 10 inches lower, turning the opponent's attack to the right low.

FIG. 288. Small Sword, Thrust and Parry in Line of Low Sixte

493. Quinte.—Carry the hand and blade in a parallel line about 4 inches to the left, turning the hand so that the back of the hand is turned upward.

494. Seconde.—Carry the hand and blade to the right low; hand the height of the hip, back of hand up, point of sword 3 inches lower than hand.

FIG. 289. Small Sword, Thrust in Low Sixte and Parry of Seconde

495. Prime.—Turn the hand in Tierce (back of the hand up), carry the point of sword a little to the right, quickly lower the point and carry the whole blade to the left to ward off the thrust to the left of the body, the right fore-arm bent and just below the collar-bone, back of hand curved outward, with the thumb to the rear.

FIG. 290. Small Sword, Thrust in Quarte and Parry of Prime

496. Tierce.—From position of Quarte Guard, shift the hand quickly to the right about 4 inches, at the same time turn the back of the hand upward, keep the blade in a parallel line, point slightly higher than the hand, the same height as in the Sixte Parry.

497. The Lunge.—Quickly extend the sword and arm at the target, straightening the left leg and carry the right foot forward about twice its own length, toe forward and in such a position that the right knee is directly above the right instep, left foot flat on the floor, body erect and

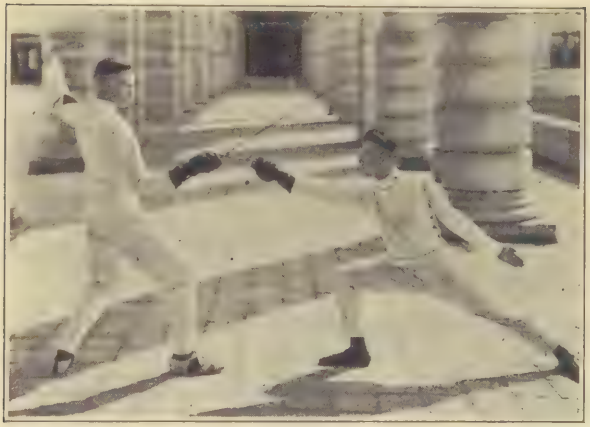

FIG. 290a. Small Sword, The Parry in Tierce and Attack in Line of Sixte

head thrown back, at the same time let the left arm fall straight to the rear, so that the left hand is on the left thigh, fingers extended and joined, the eyes fixed on the point of foil and target.

Note: After each parry extend the arm, then lunge. From the Parry of Seconde the attack is to be in the High Line of Sixte. From Quinte, in the High Line of Quarte. The rest of the attacks are to be taken in the same line as the parries take place.

498. Attack in Line of Quarte.—Extend the sword arm in Line of Quarte its full length without moving the shoulder, the hand the height of the shoulder with the point directed at the opponent. The swordsman looking over his arm to align the point—lunge.

FIG. 291. Small Sword, Thrust in Quarte and Parry of Quinte

499. Attack in Line of Sixte.—The same as in Quarte, with the difference that the hand is to the right in Sixte and the line of sight is to the left of the arm.

500. Low Quarte or Sixte.—The attack in the Low Line of Quarte or Sixte is the same as the thrust in Quarte or Sixte, with the exception that the point is directed in the low line above a line drawn directly over the hips.

501. Quinte.—The attack from the Parry of Quinte is the same as the attack from the Line of Quarte.

502. Tierce.—The attack from the Line of Tierce is the same as in Sixte.

503. Seconde.—The attack from the Parry of Seconde is in Line of Quarte or Sixte.

504. Prime.—The attack from the Parry or Prime is by a cut over the point. To cut over the point describe a full circle on the left side of body, directing the point of sword at the opponent, with the hand in Quarte (from rear to front).

SIMPLE PARRIES AND RETURNS

Note.—The simple parries are Quarte, Seconde, Tierce, Sixte, Low Quarte, Low Sixte, Prime and Quinte. The direct return attacks are made by extending the arm in the same line as the parry. In the Parry of Quinte the return is in the line of Quarte. In the Parry of Tierce the return is in the Sixte, in the Parry of Seconde the return is in Quarte of Sixte. In the Parry of Prime the return is with a cut over the point, the hand in Quarte.

The cut over the point from Prime is a full circle from rear to front, turning the hand in Quarte and directing the point at the opponent.

COMPOUND PARRIES AND RETURNS

Taking two parries in succession and returning in the line of the last parry.

Examples:

505. Sixte and Quarte: Parry and return-Lunge.

506. Low Sixte and Quarte: Parry and return-Lunge.

507. Low Quarte and Sixte: Parry and return-Lunge.

Note.—The Engagements: To change the blade from Quarte to Sixte or the reverse, which is executed in as small a circle as possible. The opponent opposing Quarte or Sixte, according to the engagement.

TEST "B"

The company, platoon, or squad to be formed in two ranks taking intervals to the right or left. Intervals as per "Landing Force Manual," U. S. Navy. Ranks to be known as front and rear. When the command for the front rank is given to advance the rear will retreat without command, or if the front rank retreats the rear rank will advance. When the command is given for one rank to attack, the other will parry.

THE ENGAGEMENTS

508. Sword Exercise, in Line of Quarte (Sixte) Assume Your Guard.—From the position of Sword Exercise both ranks execute the position of Guard in Line of Quarte (Sixte). Blades crossing about 6 or 8 inches from the point; blades coming in contact with each other without any pressure. Both ranks should be well covered in Quarte, (Sixte) points of swords slightly inclined to the right in line of Quarte and to the left in line of Sixte.

509. Sixte (Quarte) Engagements.—From the engagement of Quarte to change to Sixte. On the command Front (or rear) Rank-Sixte Engage, every front or rear rank man will lower the point of his sword and quickly grasp the opponent's blade on the opposite side and take the position of Sixte Guard. The rear rank will oppose Sixte by shifting his blade from Quarte to Sixte.

Quarte Engage is executed the same as above, with the exception that the blade is shifted to the left (or Quarte side).

510. Straight Thrust.—In Line of Quarte (Sixte); in Line of Low Quarte (Low Sixte). The parries for above are Opposition Quarte, Opposition Sixte, Parry of Low Quarte, Parry of Low Sixte.

Note:—The Parry of Low Quarte (Sixte) is the same as in test "C." All attacks and parries to be executed by the numbers.

511. Cut Over the Point. Command: Cut-Attack.—On the command Attack the front (or rear) rank will raise the swords over the opponent's blades in the shortest possible line, quickly extending the arm, directing the point at the target and lunge (without loss of time), covering themselves on the side of the opponent's blades, the cut is executed from both Quarte and Sixte Guard.

512. Disengage Attack.—The front (rear) rank on the second command quickly lowers the point of the sword and directs with a straight arm and thrust on the opposite side of the blade, the movement being executed in the quickest time possible with accuracy. (The disengage is executed from both Quarte and Sixte sides.)

PARRIES FOR DISENGAGE AND CUT

513. Quarte, Sixte, Quinte, Tierce, Prime.—Same as Test "C." Counter of Quarte and Counter of Sixte.—Counter of Quarte Parry: From the engagement of Quarte, circle around the opponent's blade so as to bring it back to the same line of engagement by going underneath the opponent's blade and circling from right to left with the point of your sword. Counter of Sixte Parry: The same as in Quarte, except the circle is from left to right.

514. Compound Attacks.—Cut and Disengage Attack; The Compound Attack is executed like the Cut Attack, but without lunging, the disengagement the same as above. Both movements are combined. The Lunge always takes place with the last movement.

515. One! Two! Attack.—To execute a One! Two! Attack, disengage the opposite side of the opponent's blade, extending the arm with the first movement in a Feint of Disengage, and on the parry of the Feint, Disengage to the opposite side with a Lunge.

Note:—The One! Two! Attack and the Cut and Disengage Attack can only be executed on simple parries in the high line.

516. Double Attack.—Feint of Disengage when the opponent parries, Counter of Quarte (Sixte) Disengage again with Lunge.

Note:—The Feint of Disengage and the Disengage are executed in quick succession, the parries for the double are: Counter of Quarte and Sixte; Counter of Sixte and Quarte; Two Counters of Quarte; Two Counters of Sixte.

517. Parries for Compound Attacks.—The following parries are the principal ones used for compound attacks: Sixte and Quarte, Quarte and Sixte, Quinte and Tierce, Tierce and Quarte, Quarte and Tierce, Sixte and Counter of Sixte, Quarte and Counter of Quarte, Counter of Sixte and Quarte, Counter of Quarte and Sixte, Two Counters of Sixte, Two Counters of Quarte.

Note:—All movements in Test "A" are explained in Tests "C" and "B."

TEST "A"

518. Sword Exercise Without the Numbers.—In line of Quarte (Sixte). Assume your guard. See paragraph 508.

519. Change Engagements, Quarte (Sixte). See paragraph 509.

520. Disengage.—Cut over the Point. Low Quarte (Low Sixte), Attack. See paragraphs 512, 511, 500.

521. Parry, Quarte, Sixte, Low Quarte, Low Sixte, Seconde, Prime, Quinte, Tierce, Counter for Quarte (Sixte).

522. Cut and Disengage.—See paragraph 514.

523. One, Two, Attack.—See paragraph 515.

524. Double Attack.—See paragraph 516.

525. Parries for Compound Attacks.—These are made by taking any two parries in succession. Parry, Sixte and Quarte, Quarte and Sixte, Tierce and Quarte, Quinte and Sixte, Quarte and Counter of Quarte, Sixte and Counter of Sixte, Two Counters of Quarte (Sixte). This test to be executed in one time without numbers.

SABRE

TEST "C"

Reference: Ship and Gun Drills, pages 185 to 193.

526. Sword Exercise.—Half face to the left, raise the sword to the height of the right shoulder, edge to the right, back of the hand up, arm extended to the right front, feet at right angles, right toe straight to the front, left toe to the left, left hand placed in the small of the back.

FIG. 292. Sabre, Position of Sword Exercise

527. Moulinet. From the Position of Sword Exercise.—Drop the point to the left and describe a full circle without bending the arm, the sword grazing the left shoulder, open the fingers to give play to the hilt and resume the original position, then reverse the hand, fingers up, edge to the left and execute a Moulinet to the right of the body in a similar manner, continuing the Moulinet alternately.

528. The Guard.—From the position of Sword Exercise, bend the forearm and bring the hand to the height of the chest, midway between the collar-bone and the hip, the point of the sword the height of the chin, edge to the right, at the same time advance the right foot twice its length, bend both knees, body erect, eyes to the front. This is the position of Right Guard. In the Left Guard, the sword is held edge to the left, fingers up, the hand opposite the center of the body.

529. The Advance (Retire), Left (Right) Step.—They are all 8-inch steps to the front, rear, right or left. The feet are always kept at right

FIG. 293. Sabre, Position of Right Guard

FIG. 294. Sabre, Position of Left Guard

angles and 16 to 18 inches apart. To advance or step to the right move the right foot first, to retire or step to the left move left foot first.

530. To Change Guard.—Reverse the position of the hand, raising the point and drawing the hand back slightly to pass over, and close to the point of the opponent's sword. The attack and parries to the left are made from the Right Guard, the attacks and parries to the right from the Left Guard.

531. The Parries.—(a) Head Parry: Carry the point of the sword a little to the right, then drop it to the left and raise the sword quickly a few inches above the head, edge up, hand in front of the right ear, the point to the left, the sword inclined slightly downward. (b) Left Cheek Parry: Carry the hand about 10 inches in front and 3 inches to the left of the left cheek, edge to the left, point up, sword inclined slightly to the front. (c) Left Flank Parry: Carry the point of sword slightly to the right, then drop the point to the left, the blade in line with elbow and hand about the height of the breast. (d) Thrust Parry: The same as Left Flank. (e) Right Cheek Parry: The reverse of the Left Cheek Parry. (f) Right Flank Parry: Describe a semicircle from left to right with the point of sword until it is a little to the right of the right knee, edge to the right, the hand to the right of the right hip, and a little below the shoulder, arm slightly bent.

532. The Attacks.—(a) Head Attack: Throw the sword point slightly to the rear to clear the point of the opponent's sword and extend the arm quickly, sword edge down, and lunge, directing your attack at the opponent's head.

FIG. 295. Sabre, Head Attack and Parry

(b) Right (Left) Cheek Attack: Throw the sword point slightly to the rear to clear the point of the opponent's sword and extend the arm quickly, sword edge to the right (left) Direct the attack at the right (left) cheek. (c) Thrust Attack: Disengage and extend the arm quickly, point of the sword at the height of the breast, edge to the right, hand opposite the left breast and lunge. (d) Right (Left) Flank Attack: The same as the Right and Left Cheek Attack, only the sword is directed at the body, between collar-bone and hip. All attacks to the left are made from the Right Guard and all attacks to the right from the Left Guard. All Cuts or Thrusts are made above the hips.

FIG. 295a. Sabre, the Thrust Attack and Parry of Quinte

533. Simple Attacks and Parries.—These are executed the same as Attacks given above. Example: Head Attack, Recover Guard and Parry Left Cheek.

534. Simple Parries and Attacks.—As Parries given above. Example: Left Cheek, Parry and Return Right Flank, Lunge.

FIG. 296. Sabre, Left Cheek Attack and Parry

FIG. 297. Sabre, Left Flank Attack and Parry

FIG. 298. Sabre, Right Cheek Attack and Parry

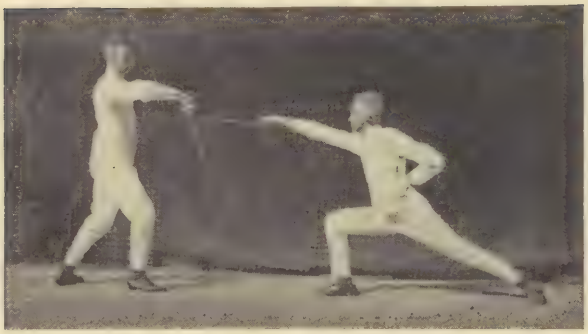

FIG. 299. Sabre, Right Flank Attack and Parry

TEST "B"

Reference: Ship and Gun Drills, pages 185-193.

535. Movements to be Executed Without Numbers.—
Sword Exercise.
Guard, right and left.
The Advance, Retire, Left Step and Right Step.

536. Simple Attacks and Parries.—

RIGHT GUARD

Front Rank	**Rear Rank**
Head Attack	Head Parry
Left Cheek Attack	Left Cheek Parry
Left Flank	Left Flank
Thrust Attack	Left Flank Parry

LEFT GUARD

Right Cheek Attack	Right Cheek Parry
Right Flank Attack	Right Flank Parry

537. Simple Attacks and Return Parries.—Examples:
Front Rank: Head Attack, Recover Guard and Parry Left Cheek.
Rear Rank: Head Parry and Return Left Cheek with Lunge.
Guard: Both Ranks Recover Guard.
Rear Rank: Right Flank Attack, Recover Guard and Parry Right Cheek.
Front Rank: Right Flank Parry and Return Right Cheek with Lunge.
Guard: Both Ranks Recover Guard.

538. Simple Parries and Return Attack.—Examples:
Front Rank: Left Flank Parry and Return for Head with Lunge.
Rear Rank: Left Flank Attack, Recover Guard and Parry Head.
Guard: Both Ranks Recover Guard.

Rear Rank: Left Cheek Parry and Return Right Flank with Lunge.
Front Rank: Left Cheek Attack, Recover Guard and Parry Right Flank.
Guard: Both Ranks Recover Guard.
The front rank will execute the attacks or parries on the command Attack.
The rear rank will execute the return attacks on the command return.
Both ranks will alternate in the attacks and parries.

539. Compound Attacks and Compound Returns.—Examples:
Front Rank: Head and Left Cheek Attack with Lunge.
Rear Rank: Right Flank and Head Return.
Front Rank: Left Cheek and Right Flank Attack with Lunge.
Rear Rank: Head and Left Cheek Return with Lunge.
Guard: Both Ranks Recover, Guard.
The front rank will execute the attacks and parries on the command Attack.
The rear rank will execute the return attacks on the command Return.
Both ranks will alternate in the attacks and parries.

540. Compound Attacks.—Are two attacks executed in quick succession, the first movement is made without a lunge, the second movement is made with lunge.

Examples for Compound Attacks:

1. Head and Left Cheek Attack.
2. Left Cheek and Right Flank Attack.

541. Compound Parries.—Are any two Parries in succession.

Examples for Compound Parries:

1. Head and Left Cheek Parry.
2. Left Cheek and Right Flank Parry.

TEST "A"

(All movements in "A" are explained in Tests "B" and "C."

542. Compound Attacks and Parries.—Examples:
Front Rank: Right and Left Flank Attack.
Rear Rank: Right and Left Flank Parry.
Front Rank: Right Flank and Left Cheek Attack.
Rear Rank: Right Flank and Left Cheek Parry.

543. Compound Attacks and Simple Parries.—Examples:
Front Rank: Left and Right Cheek Attack, Recover Guard and Parry Left Flank.
Rear Rank: Left and Right Cheek Parry, Return Left Flank with Lunge.
Guard: Both Ranks Recover Guard.
Front Rank: Head and Right Flank Attack, Recover Guard and Parry Right Cheek.

Rear Rank: Head and Right Flank Parry, Return Right Cheek with Lunge.
Guard: Both Ranks Recover Guard.

544. Single Attacks and Compound Returns.—Examples:
Front Rank: Head Attack, Lunge.
Rear Rank: Head Parry and Return Left and Right.
Cheek with Lunge.
Guard: Both Ranks Recover Guard.
Front Rank: Left Flank Attack, Lunge.
Rear Rank: Left Flank Parry and Return Head and Right Flank.
Guard: Both Ranks Recover Guard.

Note: In tests B and C Sabre examples are given for one or two movements. It is to be understood that the swordsman must use all of the attacks and parries, simple or compound in both front and rear attacks.

CANE EXERCISE

TEST "C"

The class to be formed in two ranks, intervals or distance to be taken.

545. Cane Exercise.—Execute in the same manner as Sword Exercise.

546. Moulinets.—Left and right at the head, these movements are the same as in Sabre.

547. Left and Right Flank Moulinets: The cane describes a circular cut forward at the opponent's flank, on left and right side of the body.

548. Left Cheek Moulinets.—From the position of Cane Exercise describe a full circular cut at the Left Cheek, the cane traveling on a horizontal plane.

549. Right Cheek Moulinets.—On the same principle as the Left Cheek, except that the hand is turned with the fingers up and the cut finished with back of the hand up.

FIG. 300. Cane, Position of Cane Exercise

550. Left and Right Moulinet, Forward (Backward).—Is executed by striking a left Moulinet at the head, and at the same time stepping forward with the left foot about 15 inches, then strike a right Moulinet at the head and step forward with the right foot 15 inches continue this alternately until the command Halt is given. The Left and Right Moulinet Backward is the same as above, with the exception that

the left and right feet are placed to the rear 15 inches. The exercise is continued until the command Halt is given. On the command Halt assume the position of Cane Exercise.

551. Left and Right Flank Moulinet, Forward (Backward).—Is executed by striking with an upper cut at the opponent's right side, the cane describing a circular movement from rear to front, at the same time advancing the left foot 15 inches, reverse the hand (fingers up), and describe a circular movement from rear to front at the opponent's left side, at the same time advancing the right foot 15 inches, continue alternately until command Halt is given. The Left and Right Moulinet Backward is the same as above, with the exception that the left and right feet are placed to the rear until command Halt is given. On the command Halt assume position of Cane Exercise.

552. Left Cheek Moulinet, Forward (Backward).—Describe a horizontal cut at the opponent's left cheek, at the same time advance the left and right foot alternately 15 inches with every cut. The Left Cheek Moulinet Backward is the same as above, with the exception that the left and right feet are placed to the rear 15 inches. On command Halt assume the position of Cane Exercise.

553. Right Cheek Moulinet, Forward (Backward).—Describe a horizontal cut at the opponent's right cheek, at the same time advance the left and

FIG. 301. Cane, Head Parry, Hand in Tierce

FIG. 302. Cane, Head Parry, Hand in Quarte

right foot alternately 15 inches, with every cut. On command Halt assume position of Cane Exercise. Right Cheek Moulinet Backward is the same as above, with the exception that the left and right feet are placed to the rear 15 inches.

554. The Head Parry in Tierce.—Same as in Sabre.

555. The Head Parry, Hand in Quarte.—The hand is held about 5 inches in front of the left ear, the cane in a horizontal position in front of the head and 4 inches above.

556. The Head Parry with Two Hands.—Carry the cane in a horizontal position in front and above the head about 4 inches.

557. Left or Right Cheek Parry.—Explanations the same as in Sabre.

558. Left or Right Flank Parry.—Explanations the same as in Sabre.

559. The Guard (Left and Right Moulinet Guard).—Execute the Left and Right Moulinet and assume the position of Guard the same as in Sabre.

560. Change Position of Guard to the Right.—From the position of Guard describe a Moulinet to the right, at the same time turning on the ball of the left foot and placing the right foot to the right one-quarter turn. Keep the feet 16 to 18 inches apart, and at right-angles.

561. Head Parry, Hand in Tierce.—Two strikes to the left, parry the head with two hands, strike with left and right hand, Guard, change Guard to the right—execute the four sides.

FIG. 303. Cane, Head Parry with Two Hands

562. Head Parry, Hand in Quarte.—Two strikes to the right, parry the head with two hands, strike with the left and right hand, Guard, change Guard to the right, and repeat to four sides.

Note: Explanations for Tests "B" and "A" are given in Test "C."

TEST "B"

563. Left and Right Moulinet Guard.—The same as in Test "C."

564. The Thrust.—(To the front, rear, right and left.) The thrust with the cane is a jab with both hands to the front, rear, right or left at the

opponent's face or body. The thrust can also be executed with one hand.

FIG. 304. Cane, Thrust to the Front with Two Hands Side View

FIG. 304a. Cane, The Thrust to Front, Front View

FIG. 305. Cane, Guard with Cane Over Left Shoulder

FIG. 306. Cane, Guard with Cane Over Right Shoulder and Right Foot to the Rear

565. The Attacks.—All attacks simple or compound are the same as in the Sabre, and can also be executed with a Moulinet (or circular cut). The foot movements are Advance, Retire, Right Step, Left Step, Front Double and Rear Double, Leap to the Front and Right Rear Volte. All foot movements are executed as in bayonet drill, except the Right Rear Volte and Leap to the Front.

FIG. 307. Cane, Position of Guard with Right Foot to the Rear

566. Combination of Parries and Attacks.—Parry the head with two hands, strike left and right in the high line, Thrust to the front and rear; Parry the head with two hands, strike left and right, Guard—execute the four sides.

567. Left and Right Moulinet.—Cane over the back, strike for head with lunge; recover Guard and Parry head with two hands, strike left and right, Guard—execute the four sides.

568. To Change Guard to the Front (Rear).—Strike to the right and place the left foot forward 16 to 18 inches, keeping feet at right angles. In striking to the left with the left foot to the front, strike left and place the right foot forward 18 inches. Alternate movement by striking to the right (left) with left (right) foot forward. Change Guard to the rear is executed the same as above, with the exception that the feet are placed to the rear. Example: Strike right, right foot to the rear; strike left; left foot to the rear. To assume the Guard Strike left cheek, right foot forward, Guard.

Cane over the left shoulder, two strikes to the right, change guard to the front; two strikes to the left, change Guard to the front; two strikes to the right change Guard to the rear; strike left cheek, right foot forward, Guard—Execute the four sides.

569. To Strike Backhanded with Left (Right) Hand.—Place the cane in both hands, knuckles turned down, arms hanging to their full length. Strike with the left hand, knuckles down, describing a circular cut forward, at the same time change the Guard to the front. Execute the same movement with the right hand on Command Right Foot to Rear, take position of rear guard. From this position strike left cheek, right foot forward, Guard. Example: Guard, Cane in two hands, strike backhanded with the left hand, change Guard to the front; strike back-handed

with the right hand and change Guard to the front; right foot to the rear and Parry the body with two hands; strike left cheek, right foot forward and Guard—execute the four sides.

570. Combination of Parries and Attacks.—The guard, Parry the head, hand in Quarte, two strikes to the right and leap to the front; feint for Thrust with two hands and Parry the head with two hands; strike left cheek, right foot forward, on Guard—repeat exercise to four sides.

571. To Change Position to Left.—Strike to the left and place the right foot one-quarter turn to the left, immediately turning the left foot so as to keep the feet at right-angles. To change position to the right, with the right foot to the rear, describe one-half turn with the left foot, which brings the right foot to the rear, feet at right angles.

Examples: The Guard. Left and right Moulinet at the head; Left Flank Moulinet with Lunge; recover Guard and Parry the head, hand in Tierce; two strikes to the left, change position to the left and Parry the right flank and head, hand in Quarte; two strikes to the right and change position to the right, with right foot to the rear; strike left cheek, right foot forward, Guard—execute to the four sides.

572. The Side Lunge.—With the cane over the left shoulder, strike to the right and lunge directly to the right, cane on the right shoulder, turning the feet so as to keep them at right angles. To change position of knees, bend the left knee and straighten the right, at the same time strike to the left with the cane over the left shoulder, reversing the feet.

Examples: Guard. Cane over the left shoulder; two strikes to the right with Side Lunge to the right, cane over the right shoulder, change knees; two strikes to the left with cane over left shoulder, changing knees; three body cuts, right foot to rear, strike left cheek, right foot forward, Guard—execute the four sides.

573. The Volte to the Rear.—For executing Right Rear Volte, turn the body to the right rear carrying the right, left and right foot to rear in quick succession, coming to the position of Guard with right foot to the rear. Strike Left Cheek, moving right foot forward and assume position of guard. Command—Right Rear Volte.

574. Leap to the Front.—Raise the right foot slightly above the floor, replacing, and leap to the front, landing on the right foot, place the left foot to the front. Strike Left Cheek, moving right foot forward, Guard.

TEST "A"

Combination Movements (Attack, Parry and Foot).

575. Movements from the Position of Guard.—Two strikes to the right, and leap to the front; Parry the head with two hands; strike with the left and right hand in the high line. Thrust to front and rear; Parry the head with two hands; strike with left and right hand, right foot forward, on Guard. Change Guard and execute to four sides.

576. From the Position of Guard.—Feint with Moulinet for left cheek, strike twice to the right and close to the front; Parry the left cheek; feint for right flank and strike left flank with Lunge. Remain Lunge and Parry to head, hand in Tierce; strike left flank and leap to the rear. Change Guard to the right and repeat to four sides.

577. From the Position of Guard.—Right and Left Flank Moulinet cane over the back, strike for head with Lunge; resume Guard and Parry the left flank and return for head without Lunge; two strikes to the right and leap to the front; feint for Thrust with two hands; Parry the head with two hands; strike left cheek, right foot forward, on Guard.

578. Additional Exercises.—Change Guard and Right Rear Volte to four sides.

BAYONET FIGHTING

TEST "C"

Reference: Landing Force Manual, and Ship and Gun Drills.

Interval or distance taken as in Infantry Drill Regulations.

579. Elementary Exercises.—High Port, Rest, Guard, Advance at High Port and Guard. Long Thrust. Correct all common faults of the same. Withdrawal after every thrust. A rapid withdrawal should be practiced before returning to the position of Guard. Short Thrust, Jab Thrust. Range of long thrust, 4 to 5 feet; range of short thrust, 3 feet. Range of jab thrust, close quarters.

580. Signal Guard.—Assume it, left hand at back, right elbow at side, right forearm pointing to front, fist closed.

581. Signal Short Guard.—Same as Guard, except that the arm is drawn straight to the rear until the fist is at the right side.

582. Signal Long Thrust.—Clap the right palm, fingers apart and extended, to that part of the body toward which the soldier is to aim.

583. Signal Short Thrust.—Same as Long Thrust, except the fist is closed. If pupil is not in position of Short Guard when he gets the signal, he comes to that position and executes Short Thrust.

584. Signal Jab.—Place both closed fists under the chin.

585. Signal Parry.—Strike a blow diagonally across the body in the direction the parry is to be made, fist closed. Follow by signal for Thrust

586. Signal Butt Strokes.—Make an upper-cut with the fist to indicate a Butt Stroke to the crotch, a right hook for Butt Stroke to the jaw, and overhand swing for Butt Stroke to the head.

587. Signal Slash, Following Butt Stroke.—After Butt Stroke signal, carry hand upward, fingers extended and joined, and slash down.

588. Signal Disengage.—Describe an arc up and forward with the right hand, fingers extended and joined, in the direction the Disengage is to be made. Make the arm with a forward motion. Follow by signal for Thrust.

589. Signal Cut-Over.—Describe an arc up and forward with the right hand, fingers extended and joined, in the direction the cut-over is to be made. Follow the signal for thrust. In executing the movements the point of the bayonet follows the movement of the trainer's hand, regardless of the relative right or left. When the trainer wishes the pupil to step forward with the rear foot in making any of the movements the trainer steps to the rear as he gives the signal. Note: There is no sentiment about the use of the bayonet. It is a cold-blooded proposition. The bayonet fighter kills or is killed. Few bayonet wounds come to the attention of the surgeon. Hand Signals are taken from the "Bayonet Training Manual" prepared at the School of Arms, Fort Sill, Oklahoma. See Landing Force Manual, U. S. Navy, for further data.

TEST "B"

See Landing Force Manual for complete details.

590. Bayonet Strokes.—Methods of injuring an opponent. The use of the knee or foot. Butt Stroke I or Crotch Stroke. Butt Stroke II or Forward Stroke. Butt Stroke III or Slash Stroke. Butt Stroke IV or Side Blow. The Advances to the Attack. When to take the position of Guard.

TEST "A"

591. Combination Exercises.—The High Port, Rest and Guard. The Advance to the Attack at Charge Bayonets. How to hold the rifle in jumping ditches and traveling through obstacles. The Long and Short Thrust, advancing the rear foot. The Long Thrust followed by the Short and Jab Thrust. The Butt Stroke, single and also in succession from Butt I-IV. The Parries for all Thrusts and Butt Strokes.

FENCING AS A SPORT

593. Early History.—The first authentic mention of the use of the sword where skill was used against brute force, is found in the account of Caesar's invasion of Britain. On the down-fall of Rome the use of the point was forgotten, not to be revived until about the fifteenth century. During the years that armor was used the sword was a weapon of offense only. With the advent of fire-arms the armor became useless, and the sword developed offensive and defensive qualities alike. For a time the use of the sword was taught by jugglers, mountbacks, acrobats and soldiers who had fought through several campaigns. It was not until the latter part of the Sixteenth Century that schools of the sword were established. Fencing has come down to the present day through two schools; the Italian, and the French.

593. History at Naval Academy.—No record is available at this time as to the date fencing was introduced at the Naval Academy. As a drill it has no doubt been carried on since the early organization in 1845. With the introduction of athletics in 1865, fencing was developed, and by 1896 the Navy had competed for the Intercollegiate Fencing Trophy, which it won for the first time in 1901. Since this date the Navy team has competed regularly for the highest Amateur honors. The Navy was well represented at the Olympic Games in 1920, and has entered other international events since.

594. Organization of Fencing.—Competition bouts in the United States were first organized by the Turn Vereins and a few fencing masters; later it was taken up by the A. A. U. At the present time the colleges of note, and many private schools and clubs carry on fencing for sport and competition. The following organizations hold annual competitive meets—

Amateur Fencer's League of America, for the U. S. Championship—as follows:

Individual	*Team Championship*
Foil,	Foil,
Sabre,	Sabre,
Epee,	Epee.

The Intercollegiate Association has meets in the above weapons, and in addition contests are held for novices, juniors and seniors. There is one International contest between England and the United States every year, and a World's Championship meet every four years.

COACHING FENCING AND FENCING IN GENERAL

595. First Requirements.—Good wholesome food, at least 8 hours of rest and plenty of hard work in the line of instruction and assault. The assult should always be practiced with the same precision as the lesson. Pay strict attention to accuracy and speed which can only be obtained by keeping good form. Short bouts with rest between are much better than more prolonged bouts. Watch out for staleness which will take all the energy out of you and slow you down. When you find you are getting over trained stop fencing for a day or two until the muscles have recovered their normal strength.

596. The Assault.—The assault is the practical application of all the rules that have been taught and practiced in the school of fencing in regards to both attack and defense. An exhaustive treatise on the proper manner in which to conduct an assault can not well be given. Two opponents face each other with the intention to hit, at the same time protecting their own person from counter hits. One tries to take the other by surprise or deceive him. Thrusts and parries which can not be agreed on beforehand following each other, to attain the object viz: to hit the opponent and protect your own person. A most careful attention to all the rules which regulate the execution of thrust and parry is required, for these are not arbitrary but will be calculated and based on mathematical principles. No one should therefore be permitted to conduct an assault before he has become perfectly familiar with all the movements of attack and defense and before he has acquired a high degree of skill of their application, having practiced all the movements in a systematic course of instruction he has now to select without a moment's hesitation, the one which the occasion requires and executes it promptly with correctness and circumspection. It would be almost impossible to enumerate in detail the many incidents, constantly occurring in this branch, or to give comprehensive description as a guide to be adhered to. General hints and rules only can be offered. The fundamental principle in the assault is to keep proper distance, the proper execution of all movements depend on it if the swordsman gets too close to his opponent it will be impossible for him to parry well if too far away he will be out of hitting range. In closing in on an opponent you offer him the same advantage that you wish to attain yourself. A swordsman must be very careful in shortening the hitting range as he is very liable to draw on an attack so he must be prepared at all times in advancing to defend himself. In order to practice the assault with success it is desirable that one of the fencers should be more experienced than the other so as to be able to correct the irregular movements of an opponent, and show

him how he should have parried or attacked. Both fencers will profit by the mode of practicing and soon become good swordsmen. If an opponent should intentionally offer a weak point he should threaten with a false attack or feint to try and find out his intentions. Constantly change your mode of defense so as to leave your opponent in utmost uncertainty of your defensive movements, as his attack will depend entirely upon your defense. A good swordsman should have a keen eye to discover the opponent's intentions. Correct judgment is necessary in selecting the best movement for attack and defense. Sensative touch to recognize by the slightest pressure on a blade for the intended movement. Quickness (shortest way in shortest time), precision, exact execution of the rule of fencing. Determination: Hesitation would place even a practiced swordsman at a disadvantage. Presence of mind not to be confused by any incident however unexpected. Those qualities should be carefully cultivated. They are capable of a high degree of development though even the most skilful swordsman cannot boast of possessing them in the highest of perfection. Let the place of combat be chosen so that neither the one or the other enjoys all its advantages.

The distance should be kept by both opponents, and neither of them must be induced to step backward when the other presses too closely upon him, the swordsman must have courage and skill enough to keep the opponent in check with his weapon, and never attempt to escape the attack by the use of his legs, he who attacks with impetuosity nearly always offers weak points of which the cool opponent can take advantage. Oppose to the impetuous opponent coolness and circumspection and never be sluggish. Fight with vivacity and without pause, alter attack and defense and never lose your self possession. The blades should be well engaged before the first thrust is made, thrusts and parries should follow each other in quick succession, and the action never be interrupted by inactivity, or by watching each other, take advantage of every opportunity of every weak point that offers itself, never thrust at random, on the contrary always compel the opponent by feints to offer a weak point before you thrust. A hit terminates a round, after which the opponents engage anew. A round is also terminated when one has been disarmed. To hit a disengaged opponent is contrary to the laws of honor, he being under every known rule unassailable. Never bend the body backward to escape a touch, this motion is useless and only practiced by beginners who by doing so never fail to offer weak points or lose their equilibrium. All attacks should be carried out very quickly, therefore avoid useless feints. They are intended to cause the opponent to offer a weak point also to conceal a plan of attack and to confuse the opponent. Nor should you betray your

intended attack by movement of hand or body as your opponent would anticipate your attack and stop you with a time thrust. While attacking do not neglect your defense. Always cover yourself on the side where the opponent's weapon is on. The thrust should hit before the right foot on developing touches the ground, that is arm and sword should move faster than the foot, return quickly to the guard if your opponent should not reposte at once. You may try a second thrust while still in development. Do not allow yourself a moment's rest if you should feel tired—terminate the assault and recover your strength. Flying thrust or cuts will be of advantage when the opponent should show little agility, execute all attacks with an extended arm.

All feints should be executed with arm so far stretched that the opponent be compelled to parry them, if the feint is not parried continue quickly into an attack. If the opponent should hold his word too straight disarm him by seconde or octave ligade, he will necessarily lose his weapon, if his wrist is not elastic use a circular movement. A swordsman who has his arm bent too much, will not be able to parry double or triple attacks. If the guard is low use High Thrust, if high use Low Thrust. The defense should constantly vary to prevent the opponent from calculating before hand what parries to expect. The attack will have to be according to the defensive movements of opponent. The thrust, though firmly executed should not be executed with all force even if the anticipated success is nearly certain, reserve power enough to recover your guard to enable you to parry and change with dexterity your mode of attack.

It is scarcely possible to carry out a good defense without offensive movements. In absolutely confining yourself to the defense, you allow your opponent the advantage of carrying out his attacks without covering his own person. In attacking you watch the parries and point to be attacked. In parring usually the sword hand, exceptions will be suggested by instinct. A tall swordsman had evidently an advantage in reach over a smaller one. The smaller one is often more agile and regular in his movements, is not so easily tired and has fewer weak points to cover than his taller opponent. The taller one can not thrust his body forward so quickly when engaging or recover his guard as fast. The smaller one therefore finds frequent opportunities to reposte also to thrust low in consequence of the opponent's blade being held high. The advantage of the taller gained in reach can be met with beats and encircles, let the smaller man keep cool, anticipate his taller opponent's developments, irritate him by spirited feints, keep his attention constantly on the stretch and tire him out.

FOR ADVANCED FENCERS

1. Disengage Attack: from line of Quarte (Sixte) Lower the point of your weapon, extending your arm and thrust quickly into the line of Quarte or Sixte.

2. One Two Attack: Execute a feint of disengage which is executed the same as disengaging without lunge and on the opponent's parry, disengage again and lunge.

3. One-Two-Three-Attack: Execute a feint of disengage, on the opponent's parry of Quarte or Sixte, execute the second Feint of disengage on the seconde parry, disengage with lunge.

4. Double Attack: Execute a feint of disengage, and on the opponent's counter of quarte (sixte) disengage again and lunge.

5. Double and Disengage: Execute a double without lunge and on the opponent's parry of counter Quarte, and Sixte or counter Sixte and Quarte. Disengage with lunge.

6. 1-2 and Deceive Counter Quarte (Sixte): Execute a 1-2 attack without lunge and on the parry of Quarte and counter of Quarte or Sixte and counter of Sixte, disengage with lunge.

7. Double and Re-Double: Execute a double without lunging and after the parry of counter of Quarte and Sixte Double again with lunge. Note: The instructor will bring the blade of the pupil in line of Quarte or Sixte according to the parry and Reposte to be executed.

Note: A Reposte is an attack after a successful parry and is executed with a straight arm without bending; hitting the opponent before he can recover his guard. The above Reposte should be used on the opponent's attack, according to the line his blade is in.

THE REPOSTES

1. Quarte Reposte: Parry quarte with a sharp tap on the blade, quickly extend your arm and hit your opponent in the line of Quarte.

2. Sixte Reposte: Parry sixte with a sharp tap on the blade, quickly extend your arm and hit your opponent in the line of Sixte.

3. Lower Quarte Reposte: Parry lower quarte with a sharp tap on the blade, quickly extend your arm and hit your opponent in the low line of quarte.

4. Low Sixte Reposte: Parry low Sixte without tapping the blade and slide your own alongside of his blade and hit in the lower line of sixte.

5. Quinte Parry and Reposte in High Line: Parry Quinte with a downward pressure and quickly extend your arm and hit your opponent in the high line.

6. Quinte Parry and Reposte in Seconde: Parry Quinte and with a sliding motion run your blade in the low line, being careful to catch the opponent's foible with the forte of your blade, hitting your opponent in the Low Line.

7. Seconde Parry and Reposte in High Line: Parry seconde with a downward hit on the blade, and quickly extend your arm and hit your opponent in the high line.

8. Seconde Parry and Reposte in Seconde: Parry seconde with an easy gliding motion extending your arm and hitting your opponent in low line.

9. Prime Reposte with Cut Over Point: Parry prime and with a full circular motion close to your body cut over the point and hit your opponent in high line of quarte.

10. Low Quarte—Encircle as a Reposte: Parry low Quarte and carry the opponent's blade in the high line of sixte extending the arm at the same time and hitting the opponent in the high line of Sixte.

11. Low Sixte Encircle as a Reposte: Parry low Sixte and carry the opponent's blade in the high line of quarte extending the arm at the same time and hitting the opponent in the high of Quarte.

12. Counter Quarte Reposte: Parry counter Quarte with a slight tap on the blade, quickly extend your arm and hit the opponent in the high line of quarte.

13. Counter Sixte Reposte: Parry counter Sixte with a sliding motion extending the arm and hitting the opponent in the high line of Sixte.

14. Counter Quarte and Encircle into Lower Line as a Reposte: Parry counter quarte and glide around the blade directing the point of the sword in the low line and oppose Sixte.

15. Counter Sixte and Encircle in to the Lower Line as a Reposte: Parry counter sixte and glide around the balde directing the point of the sword in the low line and oppose Quarte.

16. Counter Quarte, Cut over Reposte: Parry counter quarte cut over the point and hit in the high line of sixte.

17. Counter Quarte and Cut under Reposte: Parry counter quarte and cut under the blade hitting in the low line hand in Quarte.

18. Counter Sixte, Reposte with Cut Over: Parry counter sixte, cut over the point and hit the opponent in high line of Quarte.

19. Beat Quarte and Reposte: Give a strong beat against the foible of the opponent's blade and quickly extend the arm and hit in quarte.

20. Beat Tierce and Reposte: Turn the hand in Tierce and give a strong beat against the foible of the opponent's blade, turn the hand in sixte and hit in line of sixte with a straight arm.

21. Counter Sixte Reposte in Low Line: Parry counter sixte, quickly lower the point of sword and hit opponent in low line of Sixte.

22. Parry Counter Quarte Cut Beat and Reposte: Parry counter of Quarte, cut over the point turning the hand in Tierce and giving the

blade a sharp beat in Tierce quickly extending the arm and hitting in his line of sixte.

23. Parry Counter Sixte cut Beat Quarte and Reposte: Parry counter Sixte, cut over the point beat the blade in Quarte, quickly extend the arm and hit in the high line of quarte.

24. Counter Quarte and Disengage Reposte: Parry counter Quarte and quickly disengage without lunging, hitting the opponent in high line of Sixte.

GYMNASTICS

GYMNASTICS

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U. S. Naval Academy

TEST "C"

597. Formation of Class.—The class is formed in ranks facing the apparatus. The number of men in each rank is determined by the pieces of apparatus available. Men go to and from the apparatus on the double. On the command Go! the front rank take positions at the apparatus ready for the exercise. The remaining ranks are moved forwarded one pace by the right file of the front rank on the command: Class One Pace Forward—March! On the next command Go! the rank at the apparatus returns on the double and the next rank goes to the apparatus ready for the exercise. During the exercise the front rank stands at attention and the other ranks stand at ease.

598. Horizontal Bar.—Over Grip Hanging Position: The position is taken on the command: Hanging with Over Grip Up! The men spring

FIG. 308. Horizontal Bar, over Grip

FIG. 309. Spring

FIG. 310. Over

FIG. 311. Landing

upward and grasp the bar with the palms of the hands turned forward. The body hangs from the arms with the head erect, back arched, legs straight and held together and the toes pointed. On the command: Down! they quit their grasp and drop to the deck and stand at attention.

Under Grip Hanging Position: The position is taken on the command: Hanging With Under Grip—Up! The men spring upward and grasp the bar with the palms of the hands turned backward. The position of the body as in preceding paragraph. They dismount on the command, Down!

599. Parallel Bars.—Balance Hanging Position: The position is taken on the command: Balance Hanging—Mount! The hands grasp the end of the bars, the heels are raised and the knees slightly bent (Spring Standing Position) by springing from the deck the body is carried upward to the Balance Hanging Position above the bars. On the command Dismount! the men drop to the deck in the reverse manner.

Balance Hanging Knee Upbending: The starting position is taken as in preceding paragraph on the command: Balance Hanging—Mount!

The exercise is carried out on the command:

Left (R) Knee Upward—Bend! Feet Together—Place! Standing position is returned to on the command: Dismount!

FIG. 312. Parallel Bars, First Position

FIG. 313. Parallel Bars, Second Position

600 Side Horse.—Balance Hanging Position: The position is taken on the command: Balance Hanging—Mount! The mounting is executed as in preceding paragraph.

The dismounting is carried out on the command: Dismount! Between Vault!

The exercise is carried out on the command: With a Short Run Between Vault—Go!

The men run up to the horse, grasp both pommels, spring off from the deck with both feet and carry the legs forward between the arms and land on the opposite side of the horse with their backs toward the apparatus. On the spring upward the knees are bent and drawn up in front of the body, the hands assist by pushing off from the pommels.

Horizontal Vault: The exercise is carried out on the command: With A Short Run Horizontal Vault Legs Left (R)—Go!

As above, the spring upward is executed and the legs carried to the named side. The body is raised high enough so that it is in a horizontal position above the horse and parallel with same. The men land on the opposite side of the horse with their backs toward the apparatus.

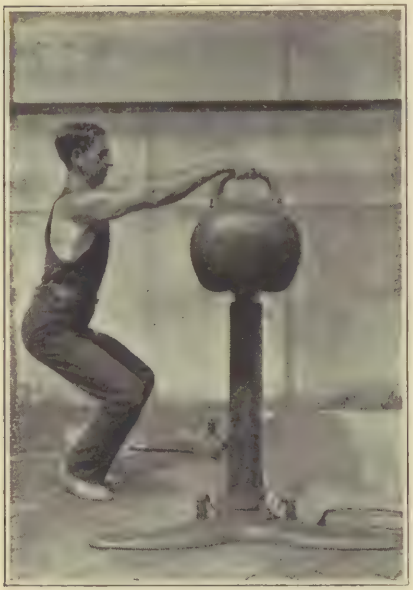


FIG. 314. Horse, First Position

FIG. 315. Horse, Second Position

FIG. 316. Horse, Third Position

FIG. 317. Horse, Fourth Positon

FIG. 318. Horse, Fifth Position

FIG. 319. Parallel Bars, Third Position

TEST "B"

601. Horizontal Bar.—Over Grip Hanging: Swinging: The starting position is taken as in paragraph 598 on the command: Hanging with Over Grip—Up!

The exercise is carried out on the command—Swing! The arms are bent and the body raised upward to the bar at the same time the legs are raised forward, the arms are then straightened and the body thrown forward to a swing, at the end of each backward swing the hands are released and take a new grasp. The back is arched and the legs held straight and together.

The swing is stopped on the command: Steady! By grasping the bar tight and bending the body at the hips the swing will stop.

The dismount is carried out on the command: Down!

602. Parallel Bars.—Standing: Turn Mount to Ride Sitting and Dismount With Front Valut. The exercise is carried out by numbers in five counts:

One! The Balance Hanging Position is taken.

Two! The left leg is carried over the right bar and placed close to the right hand.

Three! The right hand grasps the left bar, at the same time the body is turned to the left, turning on the left thigh to the Ride Sitting Position. Hands in the rear of the thighs.

Four! The legs are swung in between the bars, on the end of the backward swing the body is carried over the right bar to a stand on the side of the bars, the left hand grasping the right bar and the right hand extended sideways, with knees slightly bent.

Five! The arms are lowered to the sides and the knees straightened.

FIG. 320. Parallel Bars, Fourth Position

FIG. 321. Parallel Bars, Fifth Position

603. Side Horse.—Balance Hanging: Outward Circle Left and Right Leg To Back Balance Hanging and Dismount With Deep Jump. The starting position is taken on the command: Balance Hanging—Mount! The exercise is carried out on the command: Left (R) Leg Forward—Circle! The weight of the body is transferred to the opposite arm and the named leg is cut forward over the pommel, the hand releasing the grasp on the pommel and regrasping again after the leg has passed forward. Then the other leg is carried forward in the same manner as the Back Balance Hanging Position.

The dismount is carried out on the command: Deep Jump Forward—Go! The legs are raised forward and at the same time the hands push off

from the pommels and the body is carried forward to a stand on the deck, the knees slightly bent and the arms raised forward, with the back toward the horse.

604. Rings.—Hanging: Body Circle Backward and Forward. Starting position is taken on the command: Up!

The exercise is carried out on the command: Backward—Circle!

The body is bent at the hips and raised forward and upward between the rings, and lowered backward and downward to the Back Hang Position.

Forward-Circle! The body is circled forward in the reverse manner to the Hanging Position.

The dismount is carried out on the command—Down!

FIG. 322. Parallel Bars, Sixth Position

FIG. 323. Rings, First Position

TEST "A"

605. Gymnastics.—Execute a combination in tumbling, of three different movements, in series.

606. Equipment.—Long full tights, sleeveless leotards, high top shoes of light material, either canvas or kid with soft soles. (The high uppers give good support to the ankles.)

607. Officials.—Three judges are required for each apparatus. Duties: They judge each contestant on a maximum of ten points for each one of his exercises. The possible points a contestant could receive from all three judges for two exercises would be sixty points. One scorer, who keeps tally of the points scored and places won by contestants in the various events.

FIG. 324. Rings, Second Position

FIG. 325. Rings, Third Position

608. Events Contested.—Horizontal Bar, Parallel Bar, Side Horse, Tumbling, All-Around Championship and Rings. Club Swinging will be dropped from the list.

The contestant receiving the greatest number of points from the judges on any apparatus is declared the winner of that event. Each contestant performs in turn two exercises of his own choice for which he is marked by the judges according to the following rules. Five points for combination and difficulty, which consists of the strength of the movements employed and the way the exercise is set together. Five points for execution, which consists of the form and the smoothness of the exercise.

609. Awards, etc.—Three places are awarded, 1st, 2nd and 3rd. First place counts five points toward the team score, second place three points and third place one point. In case of a tie the points are split.

610. Scoreboard for Dual Meets.—

NAVY					(OPPONENT)			
(Score)		(Event)					(Score)	
1	2	3	4	Cont. No.	5	6	7	8
				1st Exer.				
				2nd Exer.				
				Total				
				Points				

All contestants are numbered; the home team from 1 to 4 and the visiting team from 5 to 8.

Each contestant's name and number is on the programme.

Immediately after an exercise contestant's points are posted on the scoreboard in space corresponding number. Four men are necessary to operate scoreboard, three to collect points from the judges and the other man to do the marking, etc.

SCOREBOARD IN OPERATION

NAVY					YALE			
4		HORIZONTAL BAR					5	
1	2	3	4	Cont. No.	5	6	7	8
25	23	21	26	1st Exer.	19	27	22	20
24	21	19	27	2nd Exer.	18	28	20	18
49	44	40	53	Total	37	55	42	38
1			3	Points		5		

GYMNASTICS IN GENERAL

611. The Gymnasium Team.—According to the rules of the Intercollegiate Association the team consists of not more than four men on each ap-

paratus. These men should be well developed as well as having muscular control, good nerves, and be persistent in working on the gymnastic apparatus. Their object being to learn and control difficult gymnastic feats that will outclass their opponents.

612. History of Athletics.—To Denmark belongs the credit of first making physical education a compulsory course of study. This was accomplished largely through the efforts of Franz Nachtegall. In 1814 Denmark passed a royal decree that every school should establish grounds and apparatus for gymnastics; and wherever possible one hour of gymnastics should be given each day in addition to other schedules. Sweden followed by specializing gymnastics into three divisions, military, educational and medical. Physical training was then taken up by Germany, followed by Switzerland, from whence it was introduced into England. After hard efforts a system of medical gymnastics was taken up on France about 1844. The first interest in systematic physical training in the United States appeared in 1825-26. Since that time physical training has advanced successfully in all civilized countries, into its present well organized form.

613. Gymnastics at Naval Academy.—It ranks as the 12th sport in importance, being the 8th minor sport. Gymnastics have been practiced as a means of exercise ever since 1865, but did not become a Varsity sport until 1907.

WATER POLO

(WITH NOTES ON WATER BASKETBALL)

WATER POLO

BY HENRY ORTLAND

Water Polo Coach, U. S. Naval Academy

TEST "C"

Note: Rules to satisfaction of Instructor.

614. Court.—The game is played in a court where six feet of water can be maintained in all places of playing area. Courts range from 20 to 40 feet in width, and 60 to 75 feet in length.

615. Goals.—A goal is placed at each end of the playing area, twelve inches above water level, equidistant from the sides, and is a board 4 feet long and 18 inches high, marked distinctly with the word "Goal."

616. Ball.—The ball is a regulation white rubber water polo ball not less than seven nor more than eight inches in diameter, seven-eights inflated, and free from grease or oil.

617. Team.—The team consists of six players; one of whom must be the captain. The positions are center, right and left forwards, right and left backs, and goal keeper.

618. Time of Game.—The game shall last sixteen minutes of actual playing; eight minute halves with five minutes between each half. Time taken up by conferences, repairing of material, and lining up for starts shall not be counted as time of play.

619. Marking of Court.—The court shall be marked with the following lines: one four feet from each end, the next fifteen, and the last twenty feet. These lines are measured from each and are marked so as to run parallel to the twenty or forty foot lengths and perpendicular to the sixty or seventy-five foot lengths. This gives an inside area of from twenty to thirty-five feet.

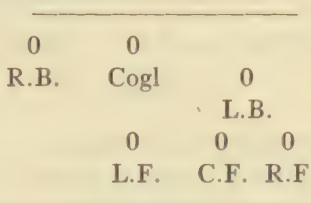
620. Goals.—Touch Goal: where the ball is carried to the board and the same touched with the ball by a member of the team—this shall constitute five points in the score. Thrown Goal: this is thrown from without the fifteen foot line striking the goal. This shall score three points.

621. Choice of Goals.—The choice of a goal is decided by the toss of a coin. The teams shall then line up at their respective goals. The referee shall put the ball in play by holding in the center of the court, attached to a

long pole. A pistol shot or whistle is the signal for forwards to start for the ball.

TEST "B"

622. Outlines for Play.—Offense:

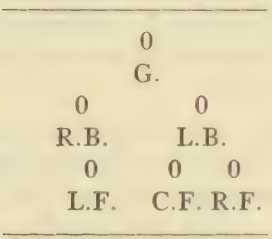


Play No. 1.

Center forward on receiving ball swims toward left back. When left back is four feet from ball right forward tackles him hard from back pushing him away from his own goal. When right forward is free both center forward and right forward advance toward goal. If goal keeper grasps center forward he passes the ball to right forward to score. If goal waits the center forward passes ball into four foot zone and jumps the goal while right forward scores. Left forward keeps the right back out of play.

Defense: Goal keeper meets play, center forward is carried out or right back covers his man so that he is unable to tackle him.

Play No. 2.



Offense: Center forward swims to 15 foot line with ball and passes in 4 foot zone in far corner. Left forward goes in to jump goal keeper if right back attempts to come in to cover he must take both. R. F. covers the L. B. Center swims after ball and scores.

Defense: Goal keeper shifts to play ball, right back takes position at goal.

TEST "A"

623. Officiating.—Fouls: If a team causes a technical or personal foul they shall be warned by the judges, and on committing of each foul an

attempt at a free goal is given the team fouled upon. The three backs of the defending team shall line up within the four foot line and three forwards of the opposing team shall line up on fifteen foot mark and an attempt at a goal shall be made until scored or until it is carried out of th fifteen foot line.

624. Penalties.—Unnecessary roughness, kicking an opponent intentionally and carrying the ball under water for a greater distance than six feet shall constitute fouls and shall be penalized as above. A player may not be tackled or submerged unless he is within four feet of the ball. Crossing the four foot line before the ball passes that line shall be termed a technical foul. Artificial support of any kind is not permitted and a player making use of any may be asked to withdraw from the game, until a goal is scored or for the rest of the half. The Referee's decision is final.

COACHING WATER POLO

625. Training for Condition.—Water polo requires one to be in the best of health. It is well to impress on a candidate, whether a proficient player or a novice, that he is required to do an unusual amount of work. When beginning the season players should have about eight or ten pounds surplus weight, while four or five pounds above "pink of condition" can be carried without ill-effects. The extra weight will act as a medium of resistance to intense cold water and prevent one from going "stale" which is easily the case in water polo.

Prior to initiation practice long easy swims will stimulate the necessary action to place one in position for work. In the game, however, sprints are essential and therefore long swims are generally abandoned later in the season. However, they act as a fitting climax to a good day's work.

To get accustomed to handling the ball to obviate fumbling, practice securing the ball, by placing the ball twelve feet from the wall and pushing off from the wall to get it. Practice swimming under water and trying to find the ball floating on the surface will give skill in discovering the ball in scrimmages, and plays in which this feature is embodied. Breathing exercises are highly recommended and they are excellent for building up the "wind." Exercises such as light calisthenics embodying breathing exercises are beneficial. General gymnastic work of the type that tightens the muscles should not be practiced.

The new player is often impressed with the wrong ideas of the game by entering in scrimmages in which veterans are taking part because they will receive punishment through holds which they cannot possibly break in their excited state of mind. In this connection any swimmer should

thoroughly verse himself with the holds given under life-saving (Holds and Breaks). With their use, skill in water polo can be acquired.

Selecting players: The formation of the team to fill positions must be carefully considered on the basis of the fundamentals of offense and defense. Often players are apt to be over-anxious and in this condition fail to remember the features of passing the ball, tackling hard, and lastly team work. A player who will at all times remember what has been told him relative to the various plays is the type needed.

For center a fast swimmer is required. Very often the burden of the team work falls his lot. In many cases he is called upon to give signals and must overcome difficulties instantly. The two forwards must be good underwater swimmers of the type ready to allow any of the team mates to score in the interest of team work. The backs should be men who can at all times keep after their own men under all conditions and never allow opponent to get out of reach. The goalkeeper must be a hard sure tackler.

WATER POLO AS A SPORT

626. History.—Rules for Water Polo were formulated in England in 1870, and by 1890 had been introduced in America. The ancients played a similar game, although no authentic record can be found regarding its origin. The present collegiate game bears no resemblance to the game first introduced in America. The old game consisted of passing a ball nine inches in diameter through an open goal marked by uprights and a cross bar. In 1897 Harold H. Reeder revolutionized the game by the introduction of systematic work which consisted of teaching all inexperienced players how to handle the ball, swimming, diving and the different strategic plays.

627. Organization at the Academy.—In the winter of 1920 it was decided to organize a Varsity Water Polo team. The first game was scheduled against City College of New York, which ended in a score of 18-6 in favor of the New Navy Team.

628. General Scope.—At the present time National A. A. U. championships in water polo are staged each year and in the inter-collegiate swimming circle a series of games is scheduled in which each team meets the other once at home and once away, and the championship is decided on the most victories scored in the series.

NOTES ON WATER BASKETBALL

630. Court.—Water basketball may be played in any court, not exceeding an area of 2500 square feet.

631. Ball.—The ball shall be the same as required in water polo.

632. Marking of Court.—A line shall be drawn across the bottom of the court or on the side, at distances of 15 feet from the ends. These lines are 15 foot lines.

633. Baskets.—Are hammock nets or cord, suspended from a metal ring 18″ in diameter and placed 5½ feet above the water in the center of the end of the court, the inside rim to extend 6′ from a rigid supporting surface. A background 6′ horizontally and 4′ vertically extending not less than 3′ above the top of the basket shall also be provided.

634. Team.—The team consists of three forwards and three backs. Substitutes may be entered by reporting to the referee when their team is in possession of the ball or when the ball is not in play.

635. Officials.—The officials are: a referee, umpire, timer and scorer.

636. Game.—The game consists of sixteen minutes of actual playing divided into halves of eight minutes each with a five minute rest between the halves. Time shall be taken out for free tries, disputes, repairing of suits, replacing men and lining up for the start. In case of a tie at the end of the second half, the teams shall rest five minutes and then play an additional three minutes.

636. Starts.—Only forwards are permitted to swim for the ball on the signal for the start by the referee with either a whistle or a gun, but all the players must enter the water under penalty of foul. A ball out of bounds shall be given to the opposing side by the men who so threw the ball.

637. Free Throw.—A free throw shall be made from the 15 foot line. One of the forwards shall take the ball and make an attempt at the goal. He shall in no way be interfered with while trying. All other players may be covered. If the basket is made, all members line up at their respective ends. The failure to make the basket puts the ball in play.

638. Scoring.—Two points shall be given for a field basket and one point for a free throw. A ball out of bounds on a free throw shall be given to one of the backs who must pass it to one of the forwards while the referee counts to five. The penalty to do so places the ball in the hands of the opposing team on the 15 foot line.

639. Fouls.—A free throw shall be the penalty for the breaking of any rule of play. Four personal fouls shall cause the player to be removed from the game.

640. Technical Fouls.—Holding on the sides of the court when in possession of the ball. Holding a player by his suit, splashing or otherwise

interfering with a player who is trying for a free throw and holding an opponent under water longer than he has possession of the ball.

641. Personal Fouls.—Rough playing, such as kicking or striking a player or tackling a player who is not in actual possession of the ball, are personal fouls. No player shall interfere with the ball while it is passing through the net. In case the ball lodges between the rings and the background, the ball shall be thrown up between two players of opposing teams as near as possible where the ball became lodged.

TENNIS

TENNIS

BY ASSISTANT PROFESSOR HENRY F. STURDY,

Tennis Coach, U. S. Naval Academy

TEST "C"

642. Rules—Blackboard lecture and demonstration of rules to satisfaction of instructor.

643. The Game—Tennis is played by two, three, or four players. In four handed game the sides consist of two men each; in a three handed game two players stand against one. The object of the game is for one side to score enough points to win a set.

644. Scoring.—A point is won when a player succeeds in so serving or returning the ball that his opponent is unable to make a good return. A good return is one that strikes within or on the boundaries of the court. The first point scored by a side is called 15; the second, 30; the third, 40; and the fourth game, provided that the leading side is two points ahead. If a side is only one point ahead after each side has won three points, it is "advantage in," if in favor of the server's side, and "advantage out" if in favor of the receiver's side. If each side has scored a point it is 15 all; two points, 30 all; three points, deuce; and then the score alternates from deuce to "advantage in" or "out" and back again to deuce until one side wins two successive points following deuce and thus wins that game.

645. A Set.—The winner in tennis is determined by the one winning of a set or of a certain number of sets. A set is won when either side gets six games, provided, always, that the leading side is two games ahead. If it is not, play must then be continued until one side has acquired a two-game lead.

646. Service.—Putting the ball in play at the beginning of each game is called the service. The winner of the toss has the privilege of selecting service or the side of the court to play in. The server (player having service) standing behind the back line, between the imaginary extension of the center line and the side line, puts the ball in play by hitting it across the net, with the racquet, so that the ball will fall into the diagonally opposite service court. The server begins the game by serving from the right side of the court. After the first point has been played, he serves from the left side, alternating thus from right to left throughout the game. If the ball should touch the net in its flight and should then strike within

the opposite diagonal service court it is a "let." This entitles the server to another try, irrespective of the number of lets that may be made. The server may not take a step, touch the back line, or have his foot across or above the back line, before the racquet hits the ball. And one foot must be on the ground at the time of racquet impact. If these rules of position are violated it is a foot fault and counts as one of the two tries the server is allowed to put the ball in play. If in the two tries the server fails to hit the ball into the diagonally opposite service court it is a double fault and the receiver wins the point.

647. Return of Service.—The service must be returned on the first bound by the receiver who may stand anywhere on the opposite side of the net.

648. Returns Other Than Service Returns.—In all returns other than that of the service, the ball, after it has crossed the net, may be played either on the first bound or before it touches the ground. All players, after the service has been delivered, may take any position on their side of the net, a player cannot hit the ball before it has crossed the net, but if it should cross the net and then bound back a player may reach over the net to hit the ball, provided that he does not touch the net. If the racquet of a player, or if any part of his clothes or person touches the net, in playing or attempting to play the ball, he loses the point. As every return is considered good until the ball touches the ground, a player, even though he is out of court, loses the point if he touches the ball in any way before it strikes the ground, with anything except his racquet. For the ball, if it has not touched the ground, becomes dead and the point is lost as soon as it touches the clothes, or the person of a player. As the boundary lines are in bounds, every return that touches one is in bounds. If the ball touches the net or a net post in any stroke other than that of service the ball is still in play.

649. Ethics of Tennis.—Never argue with your opponent. He is the sole judge of what happens on his side of the net, as you are for what happens on your side. If there is any doubt in your mind when you have to make a decision play the point over. If your opponent disagrees with you about the score do not argue but show him, if you can, how each point was made. If you cannot show him accept his opinion for you have been to blame in not keeping track of the score. In the future, be careful to call out the score as each point is made. The real tennis player much prefers to lose a point rather than to win what he does not rate.

TEST "B"

650. Court Position.—If playing a back court game, in singles (the two-handed game), always stand at least three feet behind the center of the

back line. Make it a never varying practice to return at once to this position, as soon as you have played the ball. Do not wait to see what your opponent does but come back immediately to this strategic base. Then watch how he returns your stroke. If you play a net game, stand from about six to eight feet back of the net. Never stay between the service line and the back line. In serving stand just to one side of the center of the back line.

651. Court Tactics.—Work to get your opponent in such a position that he is unable to make a good return. In working for a net position from the back court always drive deeply so that you shall have sufficient time in which to gain your position at the net and place the ball so that you cannot be passed. Watch the angle of your opponent's possible return. Then keep it closed. There are two net angle theories: One is that you should drive to deep mid-court and then close the angle of possible return by taking a position in front of the center of the net. The other is that you should drive deep to your opponent's back hand and then cover the straight line shot on the theory that the percentage of errors is greater than that of successes in backhand cross-court shots.

If you lob, make the lobs deep. Strive for accuracy rather than mere speed. Mix your strokes and pace. Drive your opponent to deep back court and then dispose a soft shot just over the net. To break up a driving game slice or chop; to break up slices or chops volley deep from the net. Analyze your opponent's game. Pick out his weakness and then attack it.

STROKES

652. Service Strokes.—To serve, throw the ball directly over your head as high as you can comfortably reach. Cutting the ball on top causes it to drop within the service court. If you are knocking it into the net you are not throwing the ball high enough. The different directions of the cut and the part of the ball hit all determine the character of the bound. Cutting the ball underneath gives it a drag bound. Hitting the ball without any cut gives great speed and a high, long bound. Cutting the ball from right to left when thrown directly in front of you makes the ball bound with a decided break.

653. Ground Strokes.—Ground strokes (the ball played on the bound) are the backbone of any effective game. Footwork is an indispensable factor, as is also the follow-through of your stroke. But of all factors, none is as important as keeping your eye on the ball. The whip of your stroke or top gives the ball the necessary drop to keep it within the court. Do not try to drive with all your might but learn to put the ball in any

part of the court desired. Practice placing along sideline; speed will come later. Speed without control never wins. Cultivate deep driving. Learn to place the ball consistently as near the back line as possible. The stroke should be made as in general all others should be, along the short strings of the racquet with the racquet head on the same level as the hand and as a rule, with the racquet head perpendicular to the ground.

654. Volleys.—Volleys should be made with the straight face of the racquet without any top or cut. There is very little follow through in volleying but, if there is time, apply your principles of footwork. In volleying your hand gripping the racquet should be held below the level of the racquet's head, as this gives greater strength to your racquet grip. If you volley from below the level of the net tilt the top of your racquet back as this enables the ball on its return to be elevated over the net. The stop volley is very effective when your opponent is in deep back court and you are close to the net. The ball is merely stopped with perhaps, a slight under spin made by slightly drawing back the racquet. The half-volley (pick-up) should be made only when unavoidable. In it the top of the racquet head should be tilted slightly forward.

655. Lobs.—Always lob as deeply as possible. If you want to win a point use a fairly low, quick sailing lob. If you wish to gain time to recover your position use a high, slow sailing lob. The difficulty of handling a very high lob makes height a very effective factor in lobbing.

656. Overhead Returns.—If a ball is played from above the head it may be angled off sharply, smashed for a high unplayable bound, or hit to deep court. The position of the player in smashing should be such that the ball, if allowed to continue its drop, would hit him in the forehead. The stroke is very similar to the American service with perhaps a fuller swing and not as much top. If a smash is desired to be made the ball should be hit with more nearly the flat racquet face. A slight cut to the ball, however, gives greater accuracy of control. Always drive deep as the tendency to net is greater than to put the ball out of court. Smashing to the corners gives you greater court area for your shots. Overhead returns from behind the service line should be defensive only and very deep to enable you to recover court position.

657. Stroke Execution.—Strokes classified according to the manner of their execution may be designated as straight-faced, topped, and cut These main classes have of course variations, each often distinctive of some. individual player's stroke development, as a result of constant practice to secure effective stroke control and versatility. In the straight faced group, which is characterized by the absence of any axial spin, there may

be classed the volley, the common ball service, and the high boundary swish. The volley is made with a locked wrist while the other two are made with a very full whole arm swing. In the next group, the topped, which is characterized by an axial spin in the same direction as the line of flight, there may be classed the forehand and backhand drives the American service, and the fast sailing lob. It is this additional axial motion imparted to the ball that enables the player to keep the ball within court and yet give great force to his strokes. Tilden's forehand stroke is made with a locked wrist, the player facing the side line, his feet at right angles to it and his body perpendicular to the net. The forearm and racquet are turned as one, the turning movement beginning at the moment of ball impact when the ball has reached a position about four feet directly in front of the player now forcing the side line. At the moment of impact the face of the racquet should be perpendicular to the ground. The shift in weight should begin the moment the ball touches the racquet. This is a most effective stroke for returning deep high bounding drives. The back hand is executed in the same way with the forward foot more across the back. In the last group which is characterized by an axial spin counter to the direction of the line of flight, there may be classed the slice, the chop, the slice service, and the cut-lob. The essential characteristic of this group is a ground drag to the bound which may also be given a pronounced break to the right or the left. Greater accuracy and stroke control is possible with the cut strokes but with much less speed than the straight faced or the topped. The reverse service is the one exception to this group. Its axial spin is from right to left; it has a high breaking bound; and it is not considered as accurate. The slice and the chop are differentiated by Tilden in his "The Art of Lawn Tennis" through the angle made by racquet with the line of flight of the ball. If the angle is forty-five degrees or over it is a chop which should be made with a locked wrist. If the angle is under forty-five degrees it is a slice, which should be made with a flexible wrist.

TEST "A"

FUNDAMENTAL PRINCIPLES OF PLAYING

658. The Eye.—Keep your eye always on the ball. Never take it off. More depends upon this than upon anything else.

659. The Racquet Grip.—Grip your racquet so that the handle is in line with your forearm. As Tilden says, shake hands with your racquet for your forehand grip. Grip your racquet handle tightly when you hit the ball. Relax your grip between strokes as it enables you to obtain better accuracy in stroke direction. Tighten up just before the racquet

makes impact with the ball. For the back hand grip place your hand about one-fourth of the racquet handle circumference more to the right. A firm grip is indispensable for the development of a sound game.

660. Footwork.—Be on your toes always. In making a forehand stroke (hitting the ball on the same side as that of your hand, holding your racquet) shift your weight from the foot, corresponding to the racquet holding hand, to the other foot, which should be put forward in line with or slightly across (the front of the rear foot). In back strokes (hitting the ball on the side opposite from that of your hand holding the racquet), the shift of weight is reversed and the front foot should be across rather than in a straight line. In serving, or in smashing lobs (high returns before they stroke the ground, and in volleying (returning a lower than your head ball before it hits the ground) this weight shift is also essential.

In making shots across the court greater effectiveness is obtained by putting the forward foot across as well as ahead of the rear foot.

661. Mental Attitude.—Make up your mind that you will practice indefinitely until you can master the fundamentals. Work always to perfect your play. Realize that in practice games it is immaterial who wins. This mental attitude is essential.

TENNIS IN GENERAL

662. History of Tennis.—In its present form tennis is a very modern game, it has its prototypes, however, in comparatively distant ages. The original game came most likely from the French game La longue paume. This original game flourished, then died out until about 1874. The first championship meet, however, was not held until 1877.

663. Organization at Naval Academy.—Tennis did not become a varsity sport until 1909, the first game being with Dickinson, which was won by the Navy 3-0. It is now organized as the 14th sport, and has a regular team organization each year.

SOCCER

SOCCER

BY TOM G. TAYLOR

Soccer Coach, U. S. Naval Academy, with notes by Associate Professor C. G. B. Laguardia, Modern Languages, U. S. Naval Academy

TEST "C"

664. Kicking the Ball, Standing Position.—Raise the body by a spring from the ground, toe pointed downwards, knee of kicking leg raised, and ball kicked with the instep or top of the foot. The spring from the ground is taken at the moment the ball is kicked. The ball is followed through with the leg after kicking. Kicking should be practiced with both feet, and from all positions.

FIG. 326. Correct Position of Foot on Ball

FIG. 327. Overhead Fly Kick

665. Kicking the Ball, Running Position.—Spring and form as in Standing Position. Additional force is obtained by straightening out the leg just at the moment the kick is made.

FIG. 328. Taking Ball Down the Wing

FIG. 329. Kicking on the Run

FIG. 330. Kicking with Side of Foot to Forward

FIG. 331. Side Kick, First Position

FIG. 332. Side Kick, Second Position, Oncoming Ball

FIG. 333. Heel Kicking Forward

FIG. 334. Heel Kicking, Pass to Left Wing

666. Volleying.—This is kicking the ball in the air as it comes toward you; both feet off the ground from a jump. This method of kicking is essential for full backs.

FIG. 335. Starting a Dribble

667. Dribbling.—This may be done while running at full speed. The ball is tapped gently with the toe of either foot or with the right and left inside of the foot. Ball must be kept as near as possible to the toe, and always within control.

668. Passing the Ball.—This is done either with the toes, the inside or outside of either foot, with the heel or the head. Ball is passed with sufficient speed to reach the player intended, and out of reach of opponents.

669. Receiving a Pass.—By trapping the ball on the ground. This is done by using the foot on top of the ball, by the side of the foot, or by the bottom of the foot. Trapping the ball in the air: This is done by stopping the ball with the side of the foot when it is in the air, about knee high, by bending body when ball is about chest high, by stopping it with chest or head when ball is high. or by receiving the ball on legs and bendingthe body forward.

FIG. 336. Right Foot Pass

FIG. 337. Split to Intercept a Pass

670. Receiving a Pass on the Run.—This may be done by receiving the ball with the feet sideways, or using inside or outside of either foot to stop the ball or pass it on.

671. Heading.—This is done by butting the ball with the head while the ball is in the air. The ball must be *met* with the head, otherwise the player may experience some pain. The ball may be headed forward, back-

FIG. 338. Trapping Ball with Inside Foot

FIG. 339. Trapping Ball with Leg

FIG. 340. Trapping with Bottom of Foot

FIG. 341. The Double Foot Trap

FIG. 342. Trapping Ball with Body

ward, or sideways. The rule for heading is: *never stoop* to head a ball. The ball should be received on or above the forehead, but not flat on top of the head.

TEST "B"

672. Players and Positions.—A soccer team is composed of eleven players who have the following positions: Goalkeeper, Right Full Back, Left Full Back, Right Half Back, Center Half Back, Left Half Back, Outside Right Forward, Inside Right Forward, Center Forward, Inside Left Forward, and Outside Left Forward.

673. Field of Play.—Rectangular field bounded by two end lines known as goal lines, and two side lines drawn at right angles to goal lines and known as touch lines. Maximum length of field 130 yards, minimum length 100 yards. Maximum breadth 100 yards, minimum breadth 50 yards.

674. Duration of Game.—Game is usually 90 minutes, two halves of 45 minutes each; as agreed upon by team captains. Between halves there is an interval of 15 minutes, unless referee agrees to a longer period.

675. Change of Goals.—Goals are changed at half-time. After each goal scored, the losing side is given the ball, which is kicked off as at the

start of the game. The opposite side to the side kicking off at start of game shall kick-off for second half.

FIG. 343. Goal Keeper Saving a Grounder from Left Wing

676. Scoring.—A goal shall be scored when the ball has passed between the goal posts (under the cross-bar) not being thrown, knocked, or carried by an attacking player. Rolling completely over line: If entire diameter of ball passes over line, score is made whether goal keeper then meets it and drives it out or not.

TEST "A"

677. Officiating.—Know your rules thoroughly. At all times maintain control of the game. Never permit the play to degenerate into a brutal contest. Soccer is a game of skill and the lighter man, if the game is played fairly, can excel at it as well as the physically larger man. It will greatly depend on the referee whether the smaller man will get a chance to use his skill. In every case the referee should be particularly careful to watch for "off side" playing.

COACHING SOCCER

678. Elements of Coaching.—Be patient. Soccer is a game which requires the use of parts of the body, the feet, which often receive the least

FIG. 344. Goal Keeper Starting Drop Kick

FIG. 345. Finish of a Shot at Goal

FIG. 346. Goal Keeper Saving a Shot

of training. Install the proper attitude towards the game. Make the players feel that soccer is not a brutal contest, and that it is a game of skill. Make your team feel that if they develop the proper strategy of play, they can win over physically superior teams without resorting to unfair means. It is important that all players be thoroughly drilled in the meaning of "off side."

FIG. 347. Parrying with Outside of Foot, when Dribbling and Met by an Opponent

SOCCER IN GENERAL

679. History and Scope of Soccer.—There is no clear history as to the origin of soccer. It may have branched off from the very early forms of football; on good authority, however, it is said to have originated from an old Chinese custom of kicking the heads of beheaded victims about the court. The modern game of soccer has become very popular in Europe and in all parts of the world where the game has been introduced. Championship matches are played in Europe, South America and at the Olympic Games.

680. Points for Individual Players.—Soccer does not permit handling of the ball and dangerous penalties are inflicted for so doing. The only player having the right to handle the ball is the goal keeper. Even that player must remember that he can not run with the ball. If he takes more than two steps with the ball, a free kick is awarded to the opponents. Team play is absolutely necessary for success. Hold your position and do not run all over the field. By failing to cover your own territory you give the opponents a free field for scoring through the gap left open by you.

681. Charging an Opponent.—This is done fairly only when it takes place shoulder to shoulder. You must not trip, hold or push your opponent from behind. Reckless rushing into a player is illegal as it may result in injury. Charge the man who has the ball. A player must not be charged in your own vicinity unless both of you are near the ball and struggling for possession of it.

682. Kicking.—Every player must develop the ability to make short passes and long passes and both with accuracy. Patient practice will soon give this ability.

FIG. 348. Throwing, in First Position

FIG. 349. Throwing, in Second Position

683. Strategy of Play.—The various lines indicate by their names what they are and what their part shall be in carrying out the strategy of play. The forward line is the line of offense. In general forward line men should always be well up the field, ready to receive passes from the backs, and ready to advance the ball in the enemy's territory and score whenever possible. As a forward line man, do not crowd in upon your defense. Your job is to score. The half-back line is a secondary line. As such, it is partly offensive and defensive. It is the backbone of any team. It must be ready at all times to add weight to the offensive of the forward line and to sustain the full-backs and goal keeper in clearing the ball out of danger. The full-backs are purely defensive. Their duty is to avoid

FIG. 350. Placing Ball for Corner Kick

FIG. 351. Finishing a Center from Left Wing

any scores. In many cases, the full-backs will be forced to clear the ball and not only that, but bear in mind that team play is necessary for success. If playing such a position, you must always be on the look-out for a possibility to clear the ball in the most advantageous way. Make your kicks count, send them as far as possible into the enemy's territory and in the vicinity of one of your own forwards. Just kicking the ball away merely postpones a score. Full-backs also must develop ability to pass the ball. Such players must excel in long passes. Remember, as a full-back that

you have half-backs playing with you and that very often they will be in a position to receive a pass advantageously. The goal keeper is absolutely the last line of defense; he must be on the alert continuously. The outstanding quality he must develop is quickness in carrying out a decision. If he decides the best thing to do is to run out and clear the ball, let him do so at once and never change his mind and decide to hang back once he has started out to clear the ball. He must remember he has 10 other men playing with him and in clearing the ball, let him try to get it to one of his men who is in a position to advance the ball towards the enemy's territory. If you are not playing the ball yourself, place yourself so that your team mate will be able to pass the ball to you or so that you can take part in the next play. It is better to clear the ball toward touch lines than toward mid field, especially if no player of your own team is uncovered.

SOCCER AS A SPORT

684. Soccer at Naval Academy.—Soccer ranks as a minor sport, and is 15th in order of precedence. Official dual meets have been held with other colleges of the Intercollegiate Soccer Association. The first game in this sport held with an outside institution was during the season 1918-1919 with a Baltimore Institution. In 1919-1920 the sport was organized similar to other sports at the Academy and two games scheduled with outside colleges.

685. Rules.—Intercollegiate soccer is conducted under "Official Soccer Football Rules, United States Football Association and Intercollegiate Soccer Association," which rules are endorsed by the National Collegiate Athletic Association.

686. Popularity of Soccer.—The game is growing in favor throughout the various colleges, perhaps the University of Pennsylvania taking the lead by organizing four teams each fall, one playing in the Intercollegiate League, two in first and second division of the Cricket Club League, and one in the Pennsylvania Soccer League. The unfortunate feature about soccer is its season, which conflicts with football.

687. Letters and Numerals.—Letters and numerals have been assigned for this sport, see Page 562. Upon the complete organization of soccer, the sport will follow a similar organization to that of Lacrosse.

688. Official Season.—The official season for soccer is October 15 to December 30, each year.

HAND BALL

HAND BALL

ARRANGED BY F. J. SAZAMA

Hand Ball Instructor, U. S. Naval Academy

TEST "C"

Note: Rules to satisfaction of instructor.

Positions given are for a right handed player.

689. Starting Position.—(Offensive) To Serve: The server stands outside the left sideline the right foot about 18 inches away from the line; and directly back of service line. Ball is held in left hand, body bent forward, right arm straight and held slightly to the rear.

FIG. 353. Starting Position (Offensive), to Serve

690. Serve.—The server drops the ball to the floor so that it will bounce to the height desired. The ball may be thrown to the floor to

permit a high bounce. After the ball has risen to its extreme height and starts falling back, bringing your body back somewhat, and swing the hand into the ball using a body and shoulder drive in swinging the arm.

691. Receiving Position.—(Defensive). In receiving the serve, position should be to the rear of second line, legs apart, hands ready, weight of body under full control, alert and ready to start in any direction.

FIG. 354. Receiving Position

692. Return of Ball.—(Defense) Ball is returned after first bounce with either hand using the body and shoulder drive in swinging the arm as in the serve.

693. Singles.—This consists of one offensive player, and one defensive player. Positions for offensive player at start of game as given in paragraph 689. The Defensive player as in paragraph 691.

694. Doubles.—The game is started by first offensive player, the server, in position given in paragraph 689. Second offensive player on right side line opposite server. First defensive player stands behind left half of second line, five feet from side line. Second defensive player stands behind second line five feet from right side line.

FIG. 355. Position for Return of Ball

695. The Offensive.—This is the side having the serve and is the only side that can score points.

696. The Defensive.—This side cannot score, but must prevent the offensive side from scoring.

697. The Game.—Twenty-one points constitutes a game.

698. Scoring.—Points are scored by the Offensive side by making the Defensive side miss the ball the first bounce from the board. Points are deducted for penalties.

TEST "B"

699. Stages of Learning Hand Ball.—First Stage: Play all balls on first bounce. When ability to judge speed and direction has been acquired, proceed to next stage. Second Stage: Learn to judge the ball coming from the board before the first bounce. Third Stage: Develop judgment of direction between opponent's hand and board. Final Stage: Learn to fathom opponent's intentions before play has been made.

700. Form for Striking Ball.—The only safe method of striking the ball is with the full arm movement with shoulder and body. This is the only method by which a fine control of drives can be acquired.

701. Object in Driving Ball.—The ball should be driven against the board so as to be put in the court out of reach of the opponent.

TEST "A"

702. Terms of the Game.—Get: a difficult return. Hinder: a returning ball that strikes an opponent. Rally: a rapid returning of ball by both sides for a minute or more, no advantage gained by either side. Killed ball: a scoring shot too low to be caught on the bounce. Ace: a point scored by a shot that the opposition failed to touch. Error: a ball touched legally, but not returned legally. Fluke: an extraordinary shot. Safety: a shot from a weak position preventing a score for the opposition. Cutting the line: shots that are played close to or on the second line. Shading the line: shots that fall close to the line. Wild: shots that miss the board. Steady: persistently good shots. Serve: one ball served from the serving position. Service: a number of consecutive serves.

703. Officiating.—The officials are a referee and an umpire. Referee has charge of the game, directs the players, decisions, enforcement of rules, and penalties. The referee may take any position in the field, and move about in the court while the ball is not in play. The Umpire watches the players for unfair play, ball on side lines, keeps score of game. The Umpire's decisions are final over the Referee's decision.

704. Court.—A standard hand ball playing field is 45 feet by 40 feet, by 55 feet. Board is 10 feet by 20 feet. Service line is 13 feet from board, second line 26 feet from board, court is 20x26 feet.

HAND BALL AS A SPORT

705. Rules.—Hand Ball is played under Rules of American Hand Ball. These rules are under the Amateur Athletic Union.

706. Organization of Hand Ball.—To date Hand Ball is not an Intercollegiate game, but is played on an inter-class basis. It ranks 16th in Naval Academy sport.

707. Academy History.—Hand Ball was organized in 1909 when 16 courts were built and the game introduced on an inter-class basis. Earlier than this it was played occasionally for pastime but had no definite standing.

708. Object of Game.—Hand Ball is easily learned, is an indoor or outdoor game, develops a quick eye, good judgment and coordination of mind and body. It is also good in developing breathing and speed.

HAND BALL IN GENERAL

709. Origin.—American Hand Ball is an evolution of another game. It has developed from Irish Hand Ball (Four Wall), Cuban Hand Ball, and Squash Tennis. It has been Americanized into the present game which is a very fast and interesting sport.

710. Irish Hand Ball.—This game is not played at the Academy but is mentioned as being the second in importance to American Hand Ball. It is founded on the rules of the Gaelic Athletic Association of Ireland. In the Irish game 15 aces, or points, constitute the game.

GOLF

GOLF

BY LIEUTENANT B. F. PERRY,
U. S. Navy

711. Golf at Naval Academy.—Golf is not at this time organized at the Academy, but a few requirements have been established in order that midshipmen may know some of the fundamentals, and to provide for its expansion.

712. History.—Golf in a form similar to the modern game is evidently of Dutch origin. The term is derived from the Dutch "kolf" or the German word "kolbe." Its first introduction to midshipmen at the Academy was in 1908, when the golf links of the Annapolis Golf Club were first opened to them.

713. Scope.—Golf is the national game of Scotland, but has become international in recent years, and is now becoming one of the most popular games of the present day.

714. Golf Links.—The nine-hole course is of an average length of 3,000 yards and requires about 50 acres. Holes generally run north, south and east only to avoid the blinding afternoon sun. There is a teeing-ground or starting place and green or objective for each hole, both generally numbered in a conspicuous manner (on the sand box, by flag, etc.). The front of each teeing-ground is shown by the two markers placed in a line perpendicular to the line of play. The length of hole is determined by the nature of the ground available and rages between one hundred and five hundred yards. The course is interrupted at intervals by natural or artificial hazards.

715. Object of Play.—This is to hole the ball by means of a fewer number of strokes than your opponent. In addition to "match play" there is a method known as "medal play" in which the object is to show which of all the competitors takes the fewest number of strokes to hole the ball. The ball is teed on the first teeing-ground, driven off with a wooden driver, driven again with a brassie or an iron in an approach shot and placed on the green, and then putted into the cup. The same procedure is followed for the remaining holes. Driving is one of the hardest strokes to learn and being similar in many respects to all other strokes except putting, is given insufficient detail to give the beginner some idea of how to start.

716. How to Play Golf.—This subject is too large to be covered in detail and no attempt is made to give more than a very few points. In

driving off, the player should select a place on the teeing-ground where his feet will have a secure hold from teo to heel and where he can tee the ball on a level patch of ground He should stand at such distance from the ball that he has neither to over-reach nor to cramp himself and can make his stroke freely, comfortably and with accuracy. A general guide to this distance is to place the face of the club against the ball and stand in such a position that the end of the shaft just reaches the left knee when the latter has just the suspicion of a bend in it. The position of the feet is generally with the feet naturally spread for a solid distance, the right foot considerably nearer the ball than the left (eight or nine inches) and with a line, perpendicular to the line of drive, passing through the ball and through a point about one third of the distance between the feet from the left foot. The feet are sometimes placed at an equal distance from the ball or with the left foot nearer but the position described is more modern and more general. The club is held in several different ways but the most popular seems to be the overlapping grip. In this grip the left hand is uppermost with the fingers firmly around and the thumb resting against the side or top of the shaft. The right hand is lower and is applied so that the shaft rests in the middle joint of the first finger. The first two fingers grip the club firmly, the third finger does very little and the little one rests on top of the first finger of the left hand, overlapping it. The thumb is pressed on the top or slightly to one side of the top of the shaft. The right hand overlaps the thumb and first finger of the left hand. Never grasp the club in the palms of the hands. The club is swung from over the right shoulder to over the left describing more than a complete circle. The upward swing is by far the most important part of the stroke. Three things must be remembered in this part: first, swing up slowly; second, keep the head practically motionless; third, do not let the body swing forwards or backwards or move sideways. The whole idea is to bring the club backwards until it is behind the shoulders and about horizontal in the smoothest and easiest manner. It is practically impossible to make this part of the stroke without moving the feet and body. This should be done by gradually raising the left heel and transferring the weight of the body to the right foot and toe of the left foot, starting when the club is about two feet from the ball and is being raised. The body is twisted from the hips. The left knee is turned in and slightly bent. Keep the right elbow fairly well into the side and allow the left wrist to turn inwards underneath the shaft when the club is nearing the top of the stroke. At the top of the stroke the toe of the club should be facing the ground. Never swing further than you can without feeling that you have complete control of the club. The left wrist takes charge in starting the club down

and it is brought down with a steady acceleration principally by the arms until it nearly reaches the ball when the wrists take charge, the body begins to turn and the left knee is straightened. The weight is taken evenly on both feet at the moment of impact. The rest of the stroke, the follow through, is most important and is very similar to the upward swing except that the body tends to bend slightly forward and the arms are more or less flung after the ball. They should swing well clear of the body and come to an easy, comfortable stop. Finally, keep the head almost rigid and "keep the eye on the ball."

717. Use of Clubs.—The same general principles apply to the other clubs although there are many different details that cannot be given here. The greatest difficulty is in the length of swing and a fair guide is never to take more than a three quarter swing with an iron. The next greatest is in the "sweep" of the driving shot and the "hit" of the iron shot caused mainly by the right hand taking almost complete command in the latter.

718. Putting.—It is believed that putting can be learned by each player from experience better than he can ever be taught otherwise. It is a very delicate operation and one of the most important parts of the game but no definite rules can be laid down as to what must be done in order to putt the ball into the hole. A few general principles may be mentioned. The head and body must be kept motionless. The hands and wrists only are used, the right hand doing the work and the left steadying the club. The eye must be kept on the ball until the stroke is completed. The stance is a matter of individual choice. It is better to putt a foot beyond the hole rather than six inches short of it or as the old maxim goes, "Never up, never in." The stroke is short but must be smooth and followed through.

719. Clubs in General Use.—Brassie, bulger, cleek, driver, iron, mascie, niblic, play-club, putter, and spoons.

720. Partial Glossary of Technical Terms.—Following terms should be looked up and memorized: Addressing stance, stroke, stymie, tee, the ball, approach, birdie, bogey, bunker, bye, course, dormy, fairway, fore, foresome, green, halved, hazard, honor, lie. nassan, par, press, putt, rough, slice.

721. General.—A few remarks for the beginner may be helpful. The game is played primarily for the physical exercise involved but the beginner must realize that he has a lot of drudgery and disappointment to go through before he can hope to be at all proficient and that in being persistent enough to overcome these difficulties there is a certain amount of mental exercise attached to the game. There seems to be no limit to the skill

that can be attained in the game and every golfer works to better himself no matter how long he has played. A good start and an early start constitute half the battle and whenever possible, it is recommended that the services of a recognized professional coach be utilized both in choosing clubs and in learning the game and that this be done when young. The next best thing is to copy the style of some other good golfer.

722. Selecting Balls.—Almost any ball is satisfactory for the beginner and afterward a favorite will be chosen. In playing, the ball should be cleaned of mud and grass stains after each hole or a clean ball substituted. In crossing a water hazard a "floater" may be used.

723. Teeing.—Use a very small quantity of sand for making tees. Tees should be constructed so as to touch only the center of the ball.

GOLF AS A SPORT

724. Collegiate Scope.—Golf has been organized in some of the larger colleges, and letters or numerals are awarded. Cornell, for example, allows eight insignia in this sport.

725. Intercollegiate Championships.—These are usually played at Merion Cricket Club, Philadelphia, between teams from the following colleges—

Harvard,	Columbia,
Yale,	Princeton,
Pennsylvania,	Williams.

726. Other Championships.—The following meets are held throughout the country:

National Golf Championships.
United States Open Championship.
United States Amateur Championship.
State and Sectional Championships.
Western Open Championship.
Metropolitan Association, Amateur.
Griscom Cup Matches.
Foreign and International Championships.
American-Canadian Championships.

TRAINING

TRAINING

BY LIEUTENANT (M. C.) M. H. ROBERTS, USNRF,
Medical Officer of Athletic Department, U. S. Naval Academy

TEST "C"

727. Basis of Athletic Training.—This is the knowledge of care of the body and its various elementary functions.

728. Physical Development.—By means of intelligent training it is possible for every normal man to attain the highest physical development, however, in the beginning, the power and endurance are definitely limited.

729. Grading of Exercise.—Physical limitations must be recognized and respected or training, instead of being a boon to health and development, will injure and seriously retard them. It is therefore necessary to so grade exercise, that no undue physical strain is suddenly placed upon the individual before he is physically prepared to withstand it.

730. Exhaustion.—In the event of the body being taxed beyond its powers, the individual is usually notified in no uncertain terms of his transgression. There is a feeling of utter exhaustion accompanied by nausea and faintness, the skin becomes pale, the face drawn, the respiration rapid and shallow, and the pulse small, weak, and very rapid. Generally, on examination these men will show a decidedly low blood pressure, which is nothing more than an indication that the heart, along with other organs of the body, is unable to care for the strain placed upon it.

731. Extreme Exhaustion.—The condition described is of course the extreme result of over exertion and is rarely encountered. However, evidences of exhaustion of a lesser degree are not uncommon, and the warning should be heeded just as surely as in the most serious forms.

732. Normal Fatigue.—In a healthful reaction of an individual to a strenuous workout there is necessarily a distinct sense of fatigue, but no exhaustion, there is no faint or dizzy sensation, nausea is absent, the skin is warm and red with a profuse perspiration, pulse is rapid but strong and full, the respiration accelerated and deepened, the blood pressure elevated about thirty points above normal. It is essential then, that each man make a study of his physical abilities, learn his limitations, and though striving to overcome them, never overtax them.

733. Practical Hygiene.—A study of a few practical points in personal hygiene will be advantageous to the athlete.

Constipation: is incompatible with the highest physical development of the body. Points of value in preventing and overcoming this condition are:

1. Habit: The practice of going to stool at the same hour every day, preferably just after breakfast.

2. Diet: Vegetables, cereals, coarse bread and fruits, particularly figs and prunes, tend to prevent constipation and should be eaten in considerable quantities by men troubled with this condition.

3. Water: An excellent preventative or remedy is the drinking of relatively large quantities of cold water before breakfast, three or more glasses.

4. Regular daily exercise aids materially in preventing constipation.

5. Medicine is of little value and is generally to be avoided.

6. All cases of stubborn constipation should be reported to the medical officer for treatment.

Sleep: Eight hours of quiet restful sleep should be enjoyed by every athlete daily. He should report any restlessness or inability to sleep to the medical officer, for it is usually a symptom of physical or mental abnormality.

Means of preventing insomnia:

1. Care in diet. Make evening meal light and of things easily digested, such as milk, toast, eggs, and potatoes.

2. Prolonged warm bath at bed time—although weakening has a distinctly soothing effect and should be used by men troubled with insomnia.

3. Avoid worry over athletics and studies as far as possible. A large percentage of this trouble is due directly to mental anxiety.

Cleanliness: This is essential. However, prolonged showers under normal conditions are discouraged as they are decidedly weakening. Make the hot shower as short as is compatible with cleanliness, followed by about a half minute cold shower.

Weight: The athlete must appreciate the value of his daily weight as an index of his fitness and development. After the first few weeks of training the weight should remain practically stationary, and any consistent drop from day to day is evidence of over training which generally requires a period of rest, both mental and physical.

734. Reducing Weight.—The practice in certain sports of "training down" in order to participate in a weight lower than is normal for the individual on the whole is to be discouraged. If to make a certain weight the loss of only a few pounds, four or five, is all that is necessary, there seems

to be no injurious effects when taken off gradually by intelligent exercises and diet—not starvation; however, when carried to excess there can be no doubt of the harm done, and in extreme instances not only is there a temporary impairment of health with a possible permanent injury, but in addition, the loss of the bout is practically assured even if the opponent be mediocre.

TEST "B"

735. Diet.—What and how to eat are the most important questions for the athlete to answer. In order to answer this intelligently he should have some idea of the relative values of different foods.

736. Composition of Foods.—He should know that protein in our diet is found mostly in meat, eggs, and milk, and that it goes to build up muscles in the body; that carbohydrates, which we eat in the form of cereals, vegetables, sugar, etc., furnish energy; that fats, such as butter, oil, cream, etc., produce heat.

737. Proportion of Foods.—After considering the functions of these foods it is readily understood that the proteins form the most important part of the diet; that the carbohydrates are very essential to supply fuel for energy of the muscles and form the bulk of the diet normally.

738. Overweight.—In men having a tendency to over-weight the carbohydrates should be reduced in amount since they are the most fattening of foods. The fats are relatively unimportant in the athlete's diet and are mentioned only to warn against their injurious effects when consumed in large quantities.

739. Narcotics.—Tea, coffee, tobacco, alcohol, and highly seasoned foods should be eliminated from the diet as should excessive quantities of sugar, though reasonable amounts of the latter seem to produce no deleterious effects.

740. Liquids.—Fluids should be taken in moderation, rigid restrictions are unwise however, and often detrimental. After all, the best guide to the amount of fluid required by the body is the desire. The athlete should be warned against over indulgence particularly immediately after a workout. Better to drink frequently and in small quantities than to flood the stomach with large quantities of water. Of course, before and during a contest it should be taken sparingly, but not absolutely prohibited even then.

TEST "A"

741. Injuries.—It is of great importance that the coach and trainer know something of the care of injuries incident to athletic contests, and more important still that he know methods of preventing these injuries.

742. Muscle Bruise.—The muscle bruise is probably more frequently encountered than any other injury; usually some of the muscle fibers are broken and there is considerable hemorrhage with the resulting pain, swelling, and stiffness. Rest with the application of heat for the first 24-hours and sometimes longer is essential. Heat may be applied externally in the form of hot moist packs and the dry heat of the electric baker, or it may be directed through the entire limb by means of the D'Arsonal current of the high frequency machine. The latter is an excellent method to be employed in smaller parts of the extremities. The machine is connected by means of the heavily insulated wires from the D'Arsonal posts to soft lead electrodes which are applied directly over the injured area. The spark gap is narrowed to $\frac{1}{16}$ of an inch, the main rheostat opened completely and the current allowed to pass through the limb for one hour. Soon after the current is turned on there is a distinct sensation of warmth felt through the entire part. There should be no sensation of burning or shock; this can be prevented by making the contact between the electrodes and skin more perfect by the application of salt solution. On the second day the muscle is in the majority of cases ready for passive motion, massage and contraction. Complete and painless contraction of any muscle of the body can be produced by using the sinusoidal current of the high frequency machine. This procedure has the most efficacious results in a bruised muscle; the blood flow through the part is increased and the pain, swelling, and stiffness is greatly reduced. The improvement in function of the muscle after one treatment of this character is remarkable. To administer these contractions the machine is connected by the small insulated wires from the sinusoidal posts to the chair and palm electrodes. The buttocks and back of patient are placed directly against the chair, and the palm electrode over the muscle to be stimulated. The main rheostat is left with all resistance in the current, while the rheostat governing the sinusoidal current is gradually advanced. Always cut off the current before breaking the contact at either electrode, if this direction is not followed there will result a slight burning of the skin, not serious but unpleasant. The palm electrode may be applied either to the hand of patient or operator. In case there is a sensation of needle pricking the skin under one or the other of the electrodes, this soon disappears if the current is allowed to flow continuously for a few moments without a break, thus overcoming the resistance of the skin. The contraction of the muscle is continuous while the current passes through the part. The current should be broken every few seconds to prevent a cramp of the muscle treated. This treatment should be continued for about ten minutes—the improvement in practically every case is marked. Daily contractions are often beneficial.

743. After Care of Muscle Bruise.—This is of great importance; it must be protected by means of extra pads from further injury, for a severe blow to an old contusion produces a condition much worse and more resistant to treatment than was the first injury.

744. Rubbing Muscle Bruises.—Players and coaches alike should be warned against the "husky rubber" in case of muscle bruises or in fact any injury. Often much harm can be done to a contusion by unintelligent manipulation of the part immediately after the injury, causing increased hemorrhage, swelling and stiffness. Every injury should be reported at once to the Medical Officer who will advise about the value of massage and whatever treatment seems to indicate in each case.

745. Protection of Joints.—The protection of joints and treatment of injuries of these parts is of great importance; probably more can be accomplished in the way of prevention here than in any other phase of training. After due consideration it seems wise to advise that the ankles of every player participating in out-door sports should be supported by figure of eight canvas straps so applied as to strengthen the external ligaments (that is from within outward), except in cases of fallen arches, here the internal ligaments are to be supported in order to raise the arch, hence the application of the bandage is reversed, that is—from within outward. This practice is particularly urged in football, as its value has been clearly demonstrated.

746. For Indoor Sports.—In indoor sports played on a hard non-resilient floor the players complain of pain in ankles and muscles of the leg, especially is this condition encountered among basket ball players. They almost invariably experience relief on supporting the arch by means of a figure of eight canvas straps applied from without inward, having the foot in a markedly inverted position during the application.

747. Joints.—A sprained joint requires rest, heat, protection and support. In a severe injury of this character the ligaments are badly torn and generally require several weeks of absolute rest. Heat by means of the electric baker and high frequency machine should be employed daily; after the swelling has subsided an adhesive strap should be applied. In case of the ankle it should consist of alternating vertical and horizontal straps about one inch wide, the vertical ones extending up the leg about ten inches on each side, the horizontal extending along the foot to the toes. For the knee, adhesive straps fourteen inches long and one and one-half wide are applied from each side above, intersecting at the patella or just below and passing down the opposite side of the leg, allowing each strip to overlap the one above by three-quarters of an inch. Injured joints

particularly the knee, require the greatest care and protection thereafter in order to prevent a recurrence of the trouble.

TRAINING IN GENERAL

Massage and Athletic Rubs

Extracts from the Treatment of Athletic Injuries, Courtesy of the Denver Chemical Mfg. Co.

748. Massage.—Athletic rubs are based upon massage. Massage, however, is a much more thorough process and requires more preciseness. The body-massage is more uniform than athletic rubs. Though the latter consume less time and require less preciseness, they must be varied more or less to suit the participant in this or that particular sport.

749. General Care in Massage.—The general rule in massage is to have the table of such height as to allow the operator to maintain his elbows at about their normal position at his sides. The best position is that of keeping the elbows close to the sides using chiefly the forearms, wrists and hands. What additional pressure is necessary can be brought about from using the upper arm and shoulders.

750. Massage Cream.—In massage it is not absolutely essential to have a lubricant—especially is this the case in medical massage. Professional masseurs in many cases use no oil or cream whatever, getting the desired results solely through the action of the hand upon the body parts. In athletic runs, however, it is well to have some liquid of smooth consistency and with a stimulating effect upon the skin and subcutaneous tissues (as alcohol and witch hazel). In this way the fatigue of the athlete is relieved, circulation bettered, and system benefited by stimulation of the nerve endings.

751. Forms of Massage.—Massage is the scientific manipulation of the tissues and is not only an excellent agent in conditioning men or keeping them in condition, but may be used in various forms to treat manifold injuries. In the technique of massage there are four principal grips:

1. Effleurage. 2. Frictions 3. Petrissage. 4. Tapotement. These are French terms but are used universally. A brief description of each separate movement (grip) is as follows:

Effleurage: Recognized authorities on the subject of massage, hold that the movement of effleurage should be executed with the padded portions of the finger tips. The hands are not removed from contact with the skin while going back to the starting point. When pressure is desired, it is made when the stroke is directed toward the heel of the hand.

Tapotement: (1) Slapping, palmar surfaces of the fingers held close together are used, striking the muscles transversely, rhythmically, moving backward and forward, leaving no part untouched. (2) Flail, Backs of the semiflexed fingers are used, the fingers held loosely and open, and motion executed as in slapping. These two movements are used on the forearms, legs and back. (3) Tapping, this is done with the tips of the fingers, either spread apart or held together in the form of a cone. The former is used over the head and chest, the latter over the back, thighs, and where the muscles are grouped in masses. (4) Beating, the ulnar borders of the closed hands are used, alternating one with the other. This is used over the buttocks and thighs. (5) Hacking, this is done with the ulnar borders of the hands, open with fingers spread apart and loosely held, the hands alternate rapidly, the movement being executed from the wrist only. (6) Clapping, the palmar surfaces of the hands are used, alternating one with the other.

752. Effects of Massage Grips.—Effleurage effects a prevention of inflammation by eliminating waste matter from the tissues, by increasing metabolism (the continued cell-change) in the tissues, by relieving fatigue, and by furthering absorption in the tissues. Frictions cause a distinct compression of the tissues from the surface down, this stimulates the nerves and muscles, and an atomizing of deposits in the tissues so that they thus can be conveniently eliminated by the attending effleurage. Petrissage causes the same results locally as that effected through the effleurage and the same results as in frictions, but on a larger scale. Tapotement causes (a) a compression of soft tissue-parts against underlying bony structures; (b) an atomizing of deposits in the diseased tissues, (c) an energetic stimulation of nerves, muscles and blood vessels; and (d) a stimulation through vibration of the spinal marrow, when applied to the spine. The physiological effects of massage are first, a grinding up of deposits and the elimination of same; second, an effective stimulation of the circulation; and third, an improved metabolism and nervous stimulation. Furthermore massage causes a local anaesthesia, a correction of dislodgments, and improved respiration. Promotion of excretions is a sub-effect of properly and carefully applied massage.

753. Medical Massage.—Under this head is grouped A. Active movements and B. Passive movements. The active movements consist of exercises executed by the patient during exhalation, the operator resisting. Massage is really only a form of passive movements, but what are popularly known as passive movements are executed by the operator while the patient relaxes completely. The passive movements are generally executed in

form of rotations, though flexion and extension, etc., may be used. With athletes setting-up exercises may easily be substituted for the active movements. Palpation: or feeling with the hands for muscular soreness, is in a way a sort of massage-grip. The motion of shaking the chest during exhalation, one hand pressing against the other, the athlete's hands placed one on each side of the chest, and the legs lifted and knees bent, pressing quite violently against the athlete's abdomen (in both the latter instances the man is lying flat on his back) are worthy of being mentioned here. The later two are frequently used in football as restoratives, when men have their "wind knocked out" of them.

754. Athletic Rubs.—The patient is placed flat on his back, the operator being on the left side of the table (exceptions are made to this when he is treating the left arm and left leg with the patient lying on his back or treating the right leg with the patient lying face downward). The right arm is treated first. The different movements are as follows: (1) effleurage, three or four times from different angles so that the entire arm is covered. (2) petrissage, which then is executed from the extreme upper part of the arm and down to the wrist; lift the hands for each new kneeding grip, do not slide downwards; repeat two or three times, changing the positions of the hands so that every muscle group of the arm is covered. (3) same as 1. (4) rubbing frictions of the entire arm, hand and fingers following the same direction as in the petrissage. (5) same as 1. (6) tapotement (a). (7) same as 1. The left arm is then treated in the same manner. Now treat the chest: (1) apply effleurage in a circular fashion each hand executing the grip over its respective part of the chest. (2) Apply rubbing frictions over the entire chest, using circular frictions over the front part of the neck. (3) Same as 1. In treating the abdomen the operator uses his right hand steadying it with his left. (1) effleurage then starts at the extreme right of the abdominal area, or just below the right part of the chest ridge. The movement is executed in a letter S form, the upper hand circle of which follows the line of the chest, the back stroke passes directly over the naval, and the lower circle just grazes the union of the pelvic bones in front, in its course. This movement really constitutes three strokes of effleurage which must connect smoothly; it must be observed that the main pressure of the hand is placed on the heel part of the hand while moving away from the operator's body, and on the finger part of the hand while returning same. (2) Circular friction at small distances, covering the same S form direction as in 1. (3) Same as 1. Caution; while passing the approximate location of the appendix, that is about half way between the naval and the crest of the right hip bone, exercise a great deal of care (use a light touch) and if any "soreness from touch" is apparent, consult a regular physician

at once. Next in order is the front part of the left leg. The leg is treated exactly the same as the arm though the massage only has to cover half of the leg and the tapotement on the shin part must be omitted. Never use tapotement over any part where the bone is not covered by musculature. (Exception: the spine) the front part of the right leg follows, and is treated the same as the left. Now have the patient turn himself to a face downward position. Have him place his arms in front of him, his chin resting on his hands. Then treat the back part of the right leg first, and then the left leg. The back part of the legs are treated the same as the front part, except that the tapotement should cover the entire area from the crest of the hips down to the heels, following the sciatic nerve, situated along a median line of the back part of the leg. On the leg (a), (b), and (c) of the tapotement are all employed. The patient's back is next in order; this includes the back part of the neck also. Divide the back in two parts by an imaginary line about two inches above the crest of the hips. (1) effleurage is executed from the neck down to the imaginary line and from the seat up to this line. It must be repeated several times in order to cover the entire area. (2) circular friction from the neck down to the seat along the spine at small distances. (3) rubbing frictions covering the entire back and the back part of the neck. (4) same as 1. The above description constitutes a complete scheme of body massage. Effleurage is a most essential movement in massage, as it constitutes the grip that is used as a preliminary grip A; between the other grips B and also as a finishing movement C. If passive movements are used they should be applied afterwards.

755. Athletic Rubs and Massage.—A complete body massage consumes at least twenty minutes. On most teams a trainer could not possibly spare that much time on each man, though massage may occasionally be given to "stars" who have gone "stale" or otherwise are out of condition. While one uses lubrication in massage (generally cold cream) half pure alcohol and half witch hazel is preferably used in giving athletic rubs. Any sliding movement being impossible, effleurage is done away with; it is not necessary as men who participate in hard workouts every day acquire the necessary elimination through excessive perspiration. The effleurage is replaced by quick downward slaps with flat palms of the hands, the hands being used alternately. Frictions are not used. After the slapping a sort of a quick petrissage is employed; on the neck, chest and abdomen the petrissage is replaced by a pinching movement, light and elastic, but nevertheless effective, using both hands, the finger part grasping the tissue and pressing it against the heel part of the hands. Tapotement A and B is then used over the entire body (i. e. one treats the front

part of the body first and then the back part of the body) and the downward slapping movement is used to finish up the rub. Exceptions: When a team is traveling and strikes a climate distinctly different from that to which it is accustomed, particularly in a northern country, it is advisable upon the arrival to give each member of the team a quick, unceremonious and entirely unscientific rub with goose grease; this to prevent the men from catching cold. (2) Track men and backfield men in football are often given a similar rub with "hot stuff" (two-thirds of camphorated oil to one-third of oil of wintergreen is generally used) on cold days. Then there is generally added a kind of shaking up of the muscles, gripping whole muscle groups with both hands and giving them a sort of vibrating shake, so as to "loosen them up." Similar treatment is also given on the legs of high and broad jumpers and also pole vaulters; in the latter case the upper arms and shoulders must be included in the treatment. (3) Baseball pitchers often need this sort of treatment on their pitching arms in cold weather, or when suffering from "Glass arm." (4) Rubs of the same kind are very beneficial to swimmers, especially water basketball and water-polo players, when the water seems chilly. (5) Tennis or golf players in chilly or damp weather often need this treatment on the arm they use, before contests or between matches. (6) A similar rub all over the body with plain olive oil is frequently used on wrestlers and boxers, who have been required to take heavy "sweat-outs" in order to make weight at weighing in time, which naturally has weakened them. These rubs will help to regain lost strength (at what is called "right-side weights" these rubs are of no value at all). Caution: Never use rubs with "hot stuff" on basketball men before a game, even if the "gym" is cold at the time the game is called; the athletes will certainly warm up quickly enough in this, the most strenuous of sports, and the application of "hot stuff" will then only cause fatigue instead of giving the desired stimulation.

ROUGH AND TUMBLE

ROUGH AND TUMBLE

BY FRANK LYNCH

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756. Origin.—Rough and Tumble fighting originated with the Greeks. In Homer, both boxing and wrestling were already spoken of as arts, and from the rough and tumble fighting the Greeks developed the Pancratum, or Pankration. Pancratum, as an art and means of self defense, was the possession of the chieftains, and was as jealously guarded as the jiu-jitsu of the Samurai in Japan.

757. Purpose.—This brief course in rough and tumble work is given as means of self-defense against odds. It is for use when outnumbered and where the object is to keep the attackers at a distance until help arrives, or until the situation can be improved. The naval officer ashore in perhaps a semi-civilized country is often open to attack from hostile natives, or in returning to his ship on the water front, may encounter disreputable characters in almost any coastal city.

FIG. 357. Grasp Opponent's Right Arm Above the Elbow, Knuckles Back, Thumb Outside

FIG. 358. Step Behind Him, Hold his Elbow Close to Your Left Side

758. Care in Practice.—As many of the moves shown are apt to be bone-breaking and severe, the greatest care must be taken when practicing their use. The course must be taken up in the same manner as training with bayonets, or loaded guns on the rifle range.

TEST "C"

759. Leading a Prisoner by Finger Pressure.

FIG. 359. Take Hold of His Third and Little Finger with Right Hand, Your Knuckles Down

FIG. 360. Hold His Elbow Tight to Your Side, Pull up on His Fingers Bending His Wrist Back

760. Leading a Prisoner by One Hand.

FIG. 361. Grasp His Right Wrist With Your Right Hand, Knuckles up

FIG. 362. Pass Your Left Hand Under His Right Upper Arm, from the Outside

FIG. 363. Grasp His Right Hand, Your Thumb Under, Fingers Over His Knuckles, His Elbow Pressing Your Left Side

FIG. 364. Bend His Wrist by Pulling His Right Hand to You

761. Coming Up from the Ground, Kick to Head, and Counter Knee Break or Knee Twist.

FIG. 365. As Opponent Kicks at You with His Right Foot

FIG. 366. Grasp His Left Leg at the Ankle with Both Hands

FIG. 367. Throw Your Left Shoulder Against His Left Knee

FIG. 368. Pull His Left Foot to You and Stand up, Shift Right Hand to Toe Hold and Twist His Leg to Your Right

762. Waist Hold from Rear and Counter Toe Hold.

FIG. 369. Bend Body Forward, Quickly Grasp Opponent's Ankle with Both Hands

FIG. 370. Straighten Your Body. Pull His Right Leg up Between Your Legs, so that His Knee Presses Your Crotch

FIG. 371. Hold the Ankle with Your Left Hand, Take Toe Hold with Your Right Hand from the Inside

FIG. 372. Press Down with the Right Quickly, and Pull up with the Left

763. Back Strangle and Counter Elbow Break.

FIG. 373. Grasp Opponent's Right Forearm with Your Left Hand

FIG. 374. Drop to Both Knees, Body Straight, Knees about 12 Inches Apart

FIG. 375. Grasp His Right Upper Arm with Right Hand, Round Your Back, Duck Your Head, Pull Down on Opponent's Arm, Throwing Him to the Ground on His Back

FIG. 376. Hold His Right Hand Under Your Left Arm Pit, Place Both Hands on His Elbow, Hold His Hand Tight, Pull up on His Elbow, Drive Right Knee Into His Stomach with Force

764. Arms Pinioned to Side from Rear and Counter Elbow Break.

FIG. 377. Arms Pinioned to the Side from the Rear

FIG. 378. Raise Both Arms Sideways. Grasp His Right Forearm with Your Left Hand, Knuckles up, His Upper Arm with Your Right Hand Knuckles up

FIG. 379. Drop to Both Knees Body Straight Knees about 12 inches Apart, Round Your Back. Duck Your Head, Pull Down on Opponent's Arm Throwing Him to the Ground on His Back

FIG. 380. Hold His Right Hand Under His Left Arm Pit, Place Both Hands on His Elbow, Hold His Hand Tight, Pull up on His Elbow, Drive Right Knee in His Stomach with Force

765. Arms Pinioned from the Rear and Counter Right Elbow, Blow to Stomach.

FIG. 381. Arms Pinioned to the Side from the Rear

FIG. 382. Raise Your Arms Sideways, Bring Your Right Hand to the Front of Your Face Hand Clenched Tight

FIG. 383. Take Quarter Turn to the Left, Your Weight Equal on Both Feet, Bend Body Forward

766. Front Waist Hold and Counter Neck Twist.

FIG. 384. Place Your Right Hand Under Opponent's Chin

FIG. 385. Your Left Hand over the Top of His Head Finger Tips Touching Left Ear

FIG. 386. Pull Opponent's Head to Your Left with Your Left Hand

FIG. 387. Push Up and to the Right with Your Right Hand, at same time Raise Your Right Knee to His Crotch Quickly

767. Front Strangle and Counter, Wrist Bend or Arm Twist.

FIG. 388. As Opponent Takes the Front Strangle, Pass Your Right Hand over Top of His Right Hand, Your Thumb on Top, Fingers Under His Palm

FIG. 389. Hold His Hand Tight to Your Body, Step Back with Your Left Foot

FIG. 390. Step Back with Your Right Foot, Twist His Hand Upward, Reach up with Your Left, Grasp His Right Hand, Your Fingers in His Palm, Thumb over His Knuckles

FIG. 391. Step Back Pull Him Out of Balance, Press His Palm Toward Him, or Twist the Arm

TEST "B"

768. Crotch Kick and Counter.

FIG. 392. Opponent Kicks at Your Crotch with His Right Foot

FIG. 393. Swing Your Right Foot Back, Pivot on Your Left, Side Stepping at Same Time, Catch His Right Leg with Your Left Hand, Knuckles Under

FIG. 394. Pull up on His Leg with Your Left, at Same Time Place the Palm of Your Right Hand on the Back of His Heel

FIG. 395. Push both Hands up with Force, or Hold the Leg up with Both Hands, Kick His Crotch with Right Foot

769. Holding a Prisoner in Front of You.

FIG. 396. Take Hold the Top of His Pants at Waist from the Rear with Your Left Hand Knuckles up

FIG. 397. Keep Him in Front of You, if He shows Fight

FIG. 398. Step Forward With Your Right Foot at the same time pass Your Right Arm Between His Legs, so That Your Fore-Arm is under His Crotch

FIG. 399. Lift with Your Right Arm, Hold with Your Left, let His Head Drop Down to the Deck

770. Right Hand Blow to Face and Counter Shoulder Twist.

FIG. 400. As Opponent Strikes at You with His Right Hand

FIG. 401. Grasp His Wrist from the Outside, with Your Right Hand Knuckles Up

FIG. 402. Force up on His Elbow with Your Left Hand, hold His Right Hand Opposite Your Chest

FIG. 403. Pull up with Your Right Hand, Force His Elbow down with Your Left, Twisting Shoulder

771. Striking Opponent with Side of Hand.

FIG. 403B. Stand with Your Right Side Toward Opponent

FIG. 404. As He Strikes at Your Face with the Right Hand, Block with the Left Arm. Bear Down on His Arm

FIG. 405. Bring Your Right Hand up to Your Face, Fingers Together and Hand Open

FIG. 406. Strike the Right Side of His Neck with Side of Your Right Hand

772. Right Hand Blow to Face and Counter Elbow and Shoulder Twist.

FIG. 407. As Opponent Strikes at You with His Right Hand

FIG. 408. Grasp His Right Wrist with Your Right Hand Knuckles up, and with Your Left Hand Knuckles Down Grip Tight

FIG. 409. Duck Your Head Under Opponent's Arm by Swinging up His Right Arm, Pivot on Your Left Foot

FIG. 410. Straighten your Body, Your Feet Apart, Pull to Straighten the Arm

773. Chest Push and Counter Wrist Bend.

FIG. 411. As Opponent places His Right Hand on Your Chest to Push You Away

FIG. 412. Place Palm of Your Right Hand Over the Back of His

FIG. 413. Palm of Left Hand over the Back of Your Right

FIG. 414. Hold His Palm Tight to Your Chest and Quickly Bend Forward

TEST "A"

774. Attacked by Person with Knife and Counter Elbow Break and Knee to Crotch.

FIG. 415. Person Making an Upward Stab with Knife to Heart

FIG. 416. Grasp Right Wrist with Left Hand Knuckles Outside, Thumb Inside, Push down on Wrist

FIG. 417. Grasp His Right Elbow from the Inside, Pull with Your Right Hand, Push with Your Left Hand

FIG. 418. Bring Right Knee Quickly to His Crotch

775. Attack by Person with Knife, Counter Elbow and Shoulder Twist.

FIG. 419. Person Making Downward Stab at the Heart with Knife in Right Hand

FIG. 420. Grasp His Right Wrist with Your Left Hand Knuckles down, Thumb Outside

FIG. 421. Reach under His Right Upper Arm, Grasp His Wrist with Your Right Hand, Knuckles up

FIG. 422. Pull down on His Right Wrist with Both Hands

776. Disarming a Gun Man.

FIG. 423. Held up by a Gun Man

FIG. 424. Drop Your Hands Quickly, Your Right Grasping Pistol, Middle and Third Fingers on the Barrel, Knuckles up, Thumb Inside, Twist the Point of Pistol to His Right

FIG. 425. Grasp His Right Wrist from the Outside Fingers over the Top, Thumb Under

FIG. 426. Bend Revolver up to Your Left with Right Hand, Grip Tight with Left Breaking the Index Finger at same time Disarm the Gun Man

777. Disarming a Gun Man from the Rear.

FIG. 427. Going to the Rescue of a Person who is Held up by a Gun Man

FIG. 428. Creep up Behind Him, Grasp Revolver with Your Right Hand, Knuckles up, Thumb Inside, Bend Revolver Toward His Left

FIG. 429. Pass Your Left Arm Under His Right Upper Arm, Grasp His Right Hand Knuckles up, Thumb Inside, Hold His Elbow to Your Left Side, Disarm Him

FIG. 430. You are now in a Position to Lead Your Prisoner, Keep the Gun in Your Right Hand, or give it to the Party Rescued

LEADERSHIP

LEADERSHIP

Leadership in connection with military bearing, athletics and physical training was introduced as a course of study under this department in 1920. Information obtained in connection with team work and the individual athlete is constantly being studied by this department, and the course will most likely be enlarged in following editions.

The relationship between victory and good leadership is so closely interwoven that all prospective coaches should devote considerable study on their own account to this subject.

TEST "C"

Commands

778. Voice of Command.—Stand in position of attention, paragraph 820. Take a moderately deep inhalation, think of the tone to be used, then commence the preparatory command with a sound from the chest, for example:

To the rear - - - - - - - - - - - - -		-March!
(Preparatory)	(interval)	(Execution)
Rising	3 beats	full.

779. Preparatory.—All preparatory commands are given with a rising inflection. The pitch at which the preparatory command is started is the basis upon which the entire command will depend. The first vowel sound should be clear, strong and even and should be followed by a complete enunciation of all following sounds.

780. Interval.—At this point the cadence of the voice is most to be controlled. In a normal command the interval should be about three beats. The ending of the preparatory command should be definite, the interval should be evenly measured, and the command of execution abruptly started and with emphasis.

781. Execution.—The command of execution should be full and strong. Breaks, rasping, throaty sounds, and above all, sing-song beginnings never are to be tolerated. The execution must be sent out with all the confidence and firmness possible. The command of execution must be given crisply and with élan.

782. Acquiring a Chest Voice.—Vowel sounds are of course, the clear unobstructed sounds while the consonant sounds mostly are formed by

obstruction. An ideal combination to practice for developing a chest voice is the following:

Boat - - -AHOY!

The sound Ahoy can be uttered with greater strength than any other human sound combination, and is a standard combination for chest sound.

783. Respond to Command.—Men being led invariably react to the animation or lack of animation expressed in the leader's voice. A listless command evokes listless execution, while a voice vibrant with dynamic energy will be rewarded with a spontaneous response in kind.

784. Qualities of Sound.—All hurried or colloquial commands are deviations from a proper standard, likewise the opposite error of exaggerating the secondary accent is to be avoided. The following definitions relative to sound are given.

Accent—This is mode of giving prominence to one syllable over others when not used by way of emphasis.

Pitch—This is modification of the voice as high or low on the musical scale.

Quantity—is the length of time occupied in uttering a syllable or word element.

Stress—is force of utterance, and is determined by muscular tension, both of chest muscles and vocal cords. Much of this muscular tension goes not to increase the loudness or power of sound, but to modify it with fuller distinctness of articulation.

Resonance—is the means by which vowel quality is imparted in its passage out.

785. Vowel Sounds.—If the proper vowel sounds be mastered the consonants will in themselves be corrected. Vowel sound has its source in the glottis, i. e., vocal cords. All sound is modified by different adjustments of the flexible and movable parts of the mouth; the tongue, soft pallet, jaw, lips, cheeks and walls of pharnyx, and thus vowels are distinguished one from another. Nasal vowels add a resonance in the nasal passage and are always a blemish in speech (excepting the proper nasal consonants n, m, ng). To make a vowel-chamber complete for a clear vowel sound the lateral margins of the tongue are firmly applied all along the sides of the pharnyx and soft palate, while for labial vowels the walls of the chamber are formed in part by cheeks and lips.

786. Tension.—A tense condition of the soft parts of the walls is necessary for the resonance that is essential to the production of a vowel sound. The position of the lower jaw is important due to its connection

with the organs directly involved. When depressed it lowers the teeth, stretches the cheeks, and modifies the tongue.

787. Improvement Through Exercise.—In addition to practice in giving commands, breathing exercises, and general physical excellence will improve the voice. It will be observed that sound is very dependent upon muscular quality and tension. A general toning up of the muscles of the body likewise improves the elasticity and control of the vocal muscles.

788. Mass Commands.—These are used to develop and to give each individual a chance to "sign out" words of commands without embarrassment. When using Mass Commands the instructor will give the order Mass Command and will then proceed as follows: He will name the position for the class to assume and give the order Command and raise his arm. The class will give the preparatory command for arriving at the position named and when the instructor sharply lowers his arm will give the command of execution and at the same time execute the movement.

FROM POSITION OF ATTENTION

Instructor	*Class*
Mass Commands.	
Wing Standing—COMMAND (On the order Command, raises arm.)	Hips. (Given as instructor orders Command and gives arm signal.)
Firm. (On the command Firm, lower arm sharply.)	Firm. (Class place hands on hip, command Firm is given and executed on Instructor's command Firm and on his arm signal.)
Return—Command.	Arms Downward.
Stretch.	Stretch.
Arm signal as above.	Executed as above.
Rest Standing—COMMAND.	Neck.
Rest.	Rest.
Return—COMMAND.	Arms Downward.
Stretch	Stretch.
Stoop Falling—Command.	Stoop Falling.
Place.	Place.
Return—Command.	At—ten—
Shun.	SHUN.

Note: The command Return is the order for the class to give the command that will cause it to resume the position from which the last order was executed.

TEST "B"

Individual Qualities

789. Qualities.—Test "C" having dealt with a commanding voice and ability to give the vocal part of commands, it is essential that a leader develop certain personal qualities before leading others, and voicing commands. All authorities point out that self-reliance, poise, initiative, judgment, enthusiasm, discipline, and a conception of teamwork are essential qualities for a leader.

790. Importance of Posture.—Particular attention is called to posture and a careful study of paragraphs 814 to 823 must be made. Having acquired a good posture and a commanding voice, the next qualities are as follows:

791. Self-Reliance.—This is almost natural to the man who has developed a strong heart, steady nerves, and a healthy blood supply.

792. Poise.—This is the quality of keeping normal under unusual and disturbing conditions. By continual experience under trying conditions it is possible to develop a purpose and coolness of nature that will offset the lack of poise so noticeable at first. Actual participation in games such as football, boxing, etc., will develop this quality very quickly.

793. Initiative.—This is the ability to commence something on your own responsibility and judgment. It is a quality most essential to progress and improvement, and is needed particularly where independent command is required.

794. Judgment.—One having the ability to form correct decisions based on a comparison of facts and ideas is able to exercise good judgment.

795. Enthusiasm.—Ardor of mind. This is mental driving force and interest that binds the other essential qualities of leadership into a live issue.

796. Discipline.—The definition "To train to obedience or efficiency" most aptly describes the type of discipline to be used in leadership.

TEST "A"

Leadership of A Team

797. Fundamentals.—The work of a team is divided into two general phases—the offensive and defensive. The defensive is divided into the purely passive defense and the temporary defense, which has for its object the assumption of the offensive at the first strategic opportunity. Decisive results are obtained only by the offensive and the will to win.

798. Dissension.—The leader must learn to quickly detect dissension should it appear, and in every case a ready means of eliminating this undesirable and weakening condition should be used.

799. Cliques.—Very often cliques gain control over a team in the face of a weak leader. This experience befalls many leaders at some time or another. It is to be remembered that cliques absolutely destroy team spirit in every case, and a leader must learn to break up these cliques before they are able to gain control.

PRACTICAL GYMNASIUM TESTS

PRACTICAL GYMNASIUM TESTS

ARRANGED BY TOM G. TAYLOR
Instructor in Physical Training, U. S. Naval Academy

GROUPED FOR C, B, & A TESTS

800. Bar Vault.—Face bar at chest height, one half step from bar, grasp bar fingers over thumbs under, drop to half spring-stand. With a quick spring and combined pull with the arms, weight of body is carried over to left (right) above the bar, hand pressing strongly on apparatus during which time the whole body is held with legs straight and closed, back arched, and head back. As the body is above the bar the right hand (left) quits its grasp. The landing is made at arms length from and with left side turned toward apparatus, body in spring stand position right arm brought to side as position of attention is assumed.

FIG. 432. Bar Vault

801. Standing Broad Jump.—Position on mark, in drag spring stand, arms carried well back, heels raised, knees bent, the jump is executed by quickly and strongly outstretching of hips, knees and ankle joints so the whole body fully outstretched is thrown upward and forward, from the take off. The arms assist in the length of jump by strong swinging, forward and upward when spring is made. Landing is similar to starting position maintaining balance. The length or height of jump or vault depends on the take-off. On landing, the moment feet touch the ground is executed by means of an easy yielding in the hips, knees, feet, and ankle

joints, after which the body is again straightened to fundamental position of erect standing.

802. Running High Jump.—This is explained under paragraphs 153 and 154.

803. Dips on Parallel Bars.—Starting position, balance hang between the bars, bend the arms lowering body to arm pits, again straightening to balance hang and repeating. Chest high, shoulders flat, back well arched, legs straight, toes pointed together, head well back.

FIG. 433. Dips on Parallels

804. Chins on Horizontal Bars. (Using any grip) Jump to stretch hang on horizontal bar with body and arms straight feet together, head back. By the strength of the arms body is pulled up until chin is height of the bar, and is again lowered to stretch-hang position arms fully extended, continuing complete movement the required number of times.

805. Rope Climbing.—Hanging start position (on rope). The hands grasp the height on rope, at stretch height or somewhat higher; the body as in stretch standing with the right hand, arms are then bent as the pull-up is started by a tight gripping of the hands, and shifted up and over the other alternately until top is reached when the command "Down!" is given.

806. Make Fast on Single Rope.—Plumb hanging is executed with rope between legs, after mounting up a distance, rope is circled once around

FIG. 444. Chins on Bars

FIG. 445. Rope Climbing

right leg, instep behind rope and is then nipped by heel of left foot against right instep, passing right arm forward over rope into arm pit.

807. Short Horse.—Exercise is carried out at the end of run by coming to the position of half spring stand at the same time the hands are placed on the horse with a quick strong stretching of the hips, knees and ankle joints, producing a springing of the body, above the apparatus with a pull and push of the hands and arms assisting the body to clear the apparatus with legs spread; stride vault body erect head well up back arched; landing is made in crouch spring position.

808. Throwing Medicine Ball.—Ball is held in right hand and forearm. To gain momentum body is swayed from side to side and speed increased by a run to the mark with body centered well back. A strong heave is given as the ball is released, when the body comes forward keep feet well spread before throw is made.

809. Shelf.—Without assistance, free style mount. At the end of run, jump and grasp shelf to stretch hand position immediately pulling body up to chest height continuous with spring, swing leg on shelf, right or left, combine a strong pull of arms and legs, pull the body on shelf and rise to attention. Dismount from forward lying position, arms bent,

FIG. 446. Make Fast on Single Rope

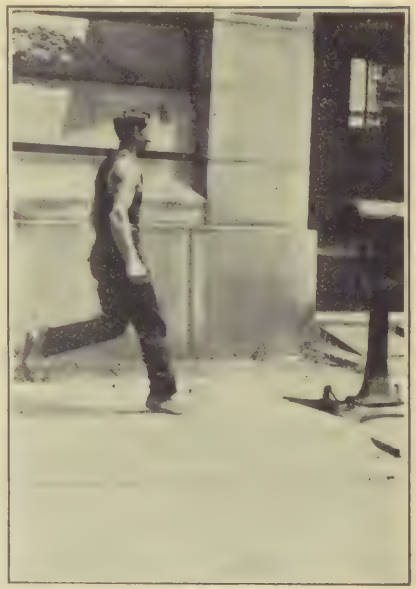

FIG. 447. Short Horse Short Run Stride

FIG. 448. Short Horse Takeoff

FIG. 449. Short Horse Highest Point

FIG. 450. Short Horse, Landing

FIG. 451. Throwing Medicine Ball, First Position

FIG. 452. Throwing Medicine Ball, Second Position

FIG. 453. Throwing Medicine Ball, Third Position

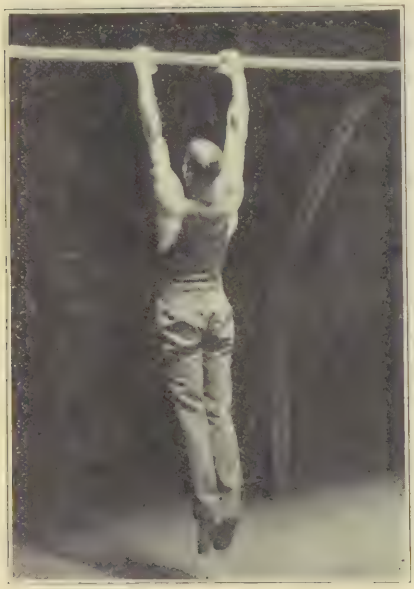

FIG 454. Shelf, First Position

FIG. 455. Shelf, Second Position

FIG. 456. Shelf, Third Position

FIG. 457. Shelf, At Attention

FIG 458 Shelf, Return

FIG. 459. Horizontal Bar

FIG. 459a. Backward Circle

FIG. 459b. Backward Circle

FIG 460. Wall Bars, Alternate Leg Raise

FIG. 461. Wall Bars, Leg Raise

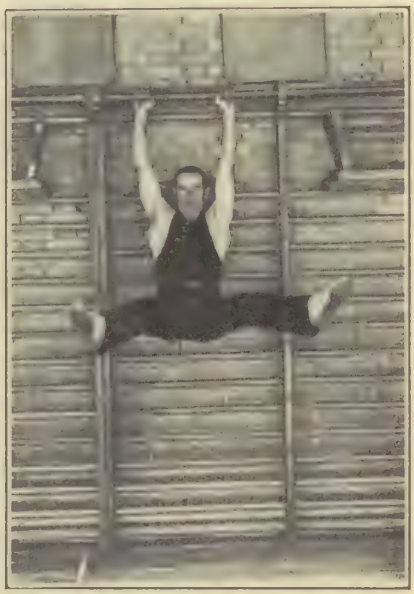

FIG. 462. Wall Bars, Legs Raised and Parting

fingers above shelf in groove, thumbs under flex well at the thighs forward circle dismount to attention.

810. Running 440 Yards.—See paragraph 143. Under Track & Field.

811. Horizontal Bar.—Backward Circle: Use any grip. Legs are bent at hips as they are carried toward apparatus so that body comes to stoop bending after which it is fully straightened out with back arched, head high, the body carried well up and in straight line between the arms with hands supported on apparatus in balance hanging position; then back to fundamental position.

812. Wall Bars.—Starting position, stretch hanging from top round of wall bar forward grip body in position of attention toes pointing feet together without moving lower part of back away from supporting apparatus. By a strong contraction of abdominal muscles raise left leg at right angles, stretch instep as left leg is lowered raise right and repeat. For second test raise both legs, and for final test raise legs parting.

FIG. 463. Tumbling Forward Roll, First Position

813. Tumbling.—Forward rolls: Position of attention to heels raise, a quick execution of knees bend to sitting, hands are placed on the ground, slightly in advance of the knees equally distributing weight on hands and feet, knees together, chest touching the knees, chin drawn well in. This crouched position is maintained throughout, as body is allowed to roll forward off balance, feet pressed strongly on the ground making a complete roll forward onto feet again.

Backward rolls. Starting position is taken as above. Action is reversed to backward roll. Care must be taken to keep the chin firmly drawn in, head bent forward throughout the roll; hands are changed from the downward stretch position on the mat and overhead half stretch in contact with the mat. As head touches mat in roll over assisting the body to regain the feet by an arm stretch movement coming to attention.

Cartwheels: Wheeling stretch stride standing—Starting position is taken as in stretch stride standing wheeling to left. The trunk is bent slightly and quickly to right and immediately afterwards to the left at the same time the feet press strongly from the ground; then the whole body with the arms and legs outstretched, well spread, swings wheel-like into a complete turn so that the stretch stride position is again taken.

FIG. 464. Tumbling Forward Roll, Second Position

FIG. 465. Tumbling Forward Roll, Finish

FIG. 466. Tumbling Backward Roll, First Position

FIG. 467. Tumbling Backward Roll, Second Position

FIG. 468. Start of Cart Wheel

FIG. 469. Cart Wheel

POSTURE

POSTURE

BY LIEUTENANT (MEDICAL CORPS) E. B. TAYLOR
U. S. Navy, Gymnasium Medical Officer, U. S. Naval Academy

814. Standard of Posture.—The following military position and gait is designated as the correct posture for all midshipmen. Variations from this standard will be considered defects in posture and corrective exercises will be prescribed in every case observed.

815. Methods of Acquiring a Proper Military Carriage.—Constant attention to posture and pride in personal appearance are distinctly necessary to smartness, precision, and manly poise. The average posture is faulty, and an ideal posture can not be obtained without careful training and discipline. There is a natural tendency to laziness of posture in standing and walking which can only be overcome by determination to live up strictly to the following form which has been developed from a careful study of the subject.

816. Points General to Posture.—The correct position is one of mental as well as physical bearing, and therefore, must be free from all mental and physical constraint. Coordination of mental and physical position must be obtained. All muscles employed must be mildly contracted and rigidity at any point is in error.

817. Chart of Errors.—A work chart is attached hereto upon which every midshipman will note his errors of posture and gait. This chart will aid in correcting faults over a period of training.

818. Over Brace.—The positions given herein are normal positions. Until the posture described has been obtained as a natural position, midshipmen will *over-brace* as much as possible.

819. Advantages of Correct Posture.—A proper posture is required for the execution of commands. Paragraph 778. It is necessary as a military quality. A correct posture relieves the pressure at the base of the brain, oppressive breathing, jar to brain, spinal column, and kidneys. In addition, it gives greater endurance and steadier nerves.

820. Position of Attention.—

1. **Head Up, Neck Vertical, Chin In.**—The head is raised until the neck is vertical; the chin is drawn inward slightly so that the head rests naturally and in perfect balance upon the neck and shoulders. In doing this several

FIG. 471. Correct Posture, Front View

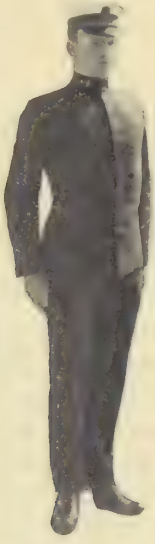

FIG. 472. Correct Posture, Quarter View

FIG. 473. Correct Posture, Side View

FIG. 474. Correct Posture, Stride

muscles and muscle groups of the neck and upper portion of the trunk come into play. The posterior Recti muscles act chiefly in bringing the head up, and the combined action of the Sterno mastoid, Trapezii, Spleni, and Complexi muscles draw the head directly backward and hold it in an erect position. The Recti muscles in the anterior group offset this action to a certain extent, preventing the head from going up too high. In executing these movements, the above muscles should not be brought into action too severely, for if marked contraction is exercised, a strained attitude will be assumed, which is wrong.

2. Eyes Straight to the Front.—The eyes look straight to the front and along a line parallel with the lower extremity of the body.

3. Shoulders Square, Evenly Balanced, Falling Naturally.—The shoulders should assume such a position that their plane is at right angles to a plane running straight through the body from front to rear. The Trapezii, Latissimus dorsi, Levator anguli scapulae and Rhomboideus act together to draw the shoulders back to their square position and brace them there. The shoulders are then allowed to fall naturally and spread out their own plane so as to make them as broad as possible. If the above muscles are brought into action too strongly, the shoulders are drawn beyond their proper position; and assume an unnatural and over-erect posture.

4. Chest Out.—This means that the chest is raised and arched up in front in a natural manner, without however, disturbing the position of the shoulders just described. Here the anterior chest muscles are brought into play—chiefly the Pectoralis major, Pectoralis minor and Subclavicus. The intercostal muscles act as accessories in expanding the chest and elevating the ribs.

5. Arms Straight Downward.—The arms are allowed to fall straight downward by the sides in a natural manner, without being stretched or the muscles unnecessarily extended or contracted. The palms are turned inward against the thighs and the thumb of each hand touches the seam of the trousers.

6. Abdomen In.—The abdominal wall is drawn inward (in much the same manner as the chin is brought forward) by the action of the muscles of the anterior abdominal wall, viz: External oblique, Transversalis and Rectus abdominalis, assisted by the Diaphragm. Thus a more natural position and arch is given to the chest, and at the same time the trunk is allowed to come into proper vertical position upon the hips.

7. Hips Back.—The hips are allowed to drop back until they assume a natural position under the trunk, and so that the weight of the body is distributed equally upon the heels and balls of the feet. The deep muscles of the back, lumbar region and the gluteal group come into play

here, all acting together to produce this position and maintain the spinal column erect.

8. Knees Together.—Knees should be brought together as closely as shape of legs will permit. If the knees are allowed to sag outward or forward the whole upper part of the body is thrown backward and out of balance. When the knees are together the weight of the body is more naturally distributed, more perfectly balanced, and the heels more easily brought into their proper position. The extensors and adductors of the thigh play a leading rôle here and act constantly to assist in balancing the body.

9. Heels Together, Feet Turned Outward Equally, Forming an Angle of Forty-five Degrees.—The heels must be together on a line parallel to the front, or the balance of the hips and shoulders will be disturbed. The weight of the body in this position must be equally distributed between the heels and balls of the feet.

821. Posture for Stride.—Interval of One Step.—In executing this movement from the position of attention the position of the head, neck and trunk is maintained as in standing. The arms are allowed to swing naturally, fore and aft, in a straight line—the right arm being brought forward six inches to the front of the median vertical line of the body as the left foot is advanced; the movement terminating as the heel strikes the ground. With muscles relaxed the arm is allowed to swing back to a position three inches to the rear of the median line as the right foot is being advanced, and the left arm is brought forward in the same manner. In stepping out the legs are extended straight forward and the feet brought in contact with the ground in such a way as to avoid jarring of the body. As soon as the heel lands the weight of the body is rolled forward to the toes from whence the body is thrust forward. This constitutes a stride and measures thirty inches from heel to heel; and in marching the cadence (number of steps) is 120 to the minute. The feet remain parallel while marching, toes pointed straight to the front. This point must be insisted upon and must be remembered in walking; for if one foot or the other is allowed to flop outward it will put one shoulder out of balance; this will throw the weight of the body to that side and cause the man to wobble out of line.

822. Position in March.—In executing movement with proper poise, a uniform standard coordination must be acquired. Midshipmen moving singly or in ranks should present the same general form.

823. Exercises for Posture.—The exercises given in paragraphs referred to below are most beneficial for obtaining a correct posture, and for eliminating postural defects. Each exercise should be practiced six times, morning and evening.

Rest Standing Position.—See paragraph 840.

Bend Standing Position.—See paragraph 837.

Forward Bend Standing Position.—See paragraph 838.

Stretch Standing: Trunk Bending Forward and Downward: See paragraph 898.

Standing—Arms Stretching Backward.—See paragraphs 878.

Wing Standing—Head Bending Backward.—See paragraph 834.

CHART FOR ERRORS IN POSTURE

Features	Faults	Date observed	Date corrected
1. Head up, neck vertical, chin in.			
2. Eyes straight to the front.			
3. Shoulders square, evenly balanced, falling naturally.			
4. Chest out.			
5. Arms straight downward.			
6. Abdomen in.			
7. Hips back.			
8. Knees together.			
9. Heels together, feet turned outward equally, forming an angle of forty-five degrees.			
Posture, interval of one step.			
Trunk			
Arms			
Legs			

COMPANION EXERCISES

COMPANION EXERCISES

ARRANGED BY L. H. MANG

Head-Master, Physical Training, U. S. Naval Academy

Companion Exercises with Living Support, Two Men Working Together

FORMATION OF THE CLASS

824. After ranks are formed, dress to the right (left) men lined up according to height, tall men on the right (left) count off Twos:

Number Twos One Long Step Forw.—March! *One Step to the Right* (*L.*) March!

The class is now in two ranks, number Twos forming the front rank and number Ones the rear rank (to be designated as such throughout the exercise). The class is now ready for the exercise.

The Starting Position. The Exercise.

825. Horizontal Stoop Falling (Ankle Support): Arm Bending and Stretching.

Starting Position is taken on the commands:

Front Rank Stoop Falling, Rear Rank Feet Sidew with a Jump.—Place! *Ankle Supports*—Place!

The rear rank men bend forward and grasp the ankles of the front rank men, and then stretch their trunk upward. (See Fig. 476)

The exercise is carried out on the commands: (See par. 1054.)

Arms—Bend! *Arms*—Stretch!

Standing Position is returned to on the command:

Attention!

In the reverse manner both ranks spring up to Attention.

Then the class is faced about and the exercise repeated.

Common faults:

Supports not giving a firm support, swaying the back in the Stoop Falling, and supporting rank not stretching up enough.

826. Point Stoop Falling (Ankle Support): Arm Bending and Stretching.

Starting Position is taken on the commands:

Front Rank Stoop Falling, Rear Rank Left Foot Forw.—Place!

Ankle Supports—Place!

As in the preceding paragraph but with the difference that the feet are raised still higher to the Point Stoop Falling as in Fig. 477.

FIG. 476.

FIG. 477.

The exercise is carried out as in the preceding paragraph on the commands:

Arms—Bend! *Arms*—Stretch!

Standing Position is returned to on the command:

Attention!

Both ranks spring up to Attention.

FIG. 478. Rest Fall Stride Standing

Then the class is faced about as in the preceding paragraph and the exercise repeated.

Common faults, see preceding paragraph.

827. Rest, Stride St. (Upper Arm Support): Trunk Falling Backward. Starting Position is taken as in pars. 840-847c, on the commands:

Front Rank Feet Sidew. with a Jump and Neck—Rest!

Upper Arms Supports—Place!

The rear rank men take a short step forward and grasp the upper arms of the front rank men.

The exercise is carried out on the commands:

Trunk Backw.—Fall!

The front rank men keeping their body rigid fall backward from the ankles, the supports bending their arms at the elbows to allow for the fall backward. (Fig. 478.)

Trunk Upw.—Stretch!

The supports stretch their arms and raise the front rank men to the First Position.

Standing Position is returned to on the command:

Attention!

Then the class is faced about and the exercise repeated.

FIG. 479. Horizontal Side Falling

Note.—The fall backward should be determined by the supports, taking care that the fall is not too great.

828. Horizontal Side Falling (Ankle Support): Lower Leg Raising.

Starting Position is taken on the commands:

Front Rank Stoop Falling, Rear Rank Feet Sidew. with a Jump.—Place!

Front Rank Change to Side Falling on Left (R.) Arm—Turn

Ankle Supports—Place!

The rear rank men bend forward and grasp the ankle of the top leg of the front rank men and then stretch their trunk upward, the lower leg resting on the deck.

FIG. 480. Body Raising

The exercise is carried out on the commands:

Front Rank Lower Leg—Raise!

The lower leg is raised until it touches the other leg. (Fig. 479.)

Leg—Sink!

The leg is lowered to the First Position.

Then the Side Falling Position is taken on the other arm and the exercise repeated.

Note.—The class is faced about as in preceding paragraph.

Standing Position is returned to on the commands:

Change to Stoop Falling—Place! Attention

829. Wing Lying (Neck Support).....Body Raising.

Starting Position is taken on the commands:

Front Rank About—Face! *Front Rank Stoop Falling*—Place!

Change to Lying on Left (R.) Arm—Turn!

Front Rank Hips Firm, Rear Rank Feet Sidew. with a Jump—Place!

Neck Supports—Place!

The exercise is carried out on the commands:

Body—Raise!

The front rank men keeping their bodies rigid are raised upward by the rear rank men. (Fig. 480.)

Body—Sink!

The front rank men are lowered to the deck.

Standing Position is returned to on the commands:

Front Rank Arms Downw.—Stretch!

Front Rank Change to Stoop Falling on Left (R.) Arm—Turn!

Both Ranks—Attention!

The exercise is repeated with the rear rank and the front rank faced about to the original front.

830. Horizontal Stoop Falling (Ankle Support): Arm Walk Forward.

Starting Position is taken as in par. 825.

The exercise is carried out by numbers on the commands:

Arm Walk Forw. by Numbers—One! Two! Three! Four!

At count One, the left hand is moved forward about six inches.

At count Two, the right hand is moved forward the same distance, the rear rank moving with the front rank.

At count Three, the left hand is again moved forward.

At count Four, the right hand and so on.

Standing Position is returned to on the command:

Both Ranks—Attention!

Note.—Arm Walk Backward can also be carried out in the above Starting Position.

831. ABBREVIATIONS USED

Backward	Backw.	Sitting	Sitt.
Downward	Downw.	Sidways	Sidew.
Falling	Fall.	Stand or Standing	St.
Figure	Fig.	Stretch or Stretching	Str.
Foot or Feet	Ft.	Striking	Strik.
Forward	Forw.	Stride	Std.
Horizontal	Hor.	Turning	Turn.
Inward	Inw.	Upward	Upw.
Jumping	Jump.	Walk	Wlk.
Left	L.	Wing	Wg.
Outward	Outw.	Yard	Yd.
Right	R.		

832. SAMPLE LESSON

Starting Position	Exercise	Parts Employed.
Wing Standing	Head Bending and Twisting	Introductory Exercises; covering all parts of the Body.
Bend Standing	Foot Placing (various dir.)	
Standing	Arm Circling	
Wing Standing	Trunk Bending Backw. and Forw.	
Forward Bend St	Lunging Forward and Outward	
Standing	Arm Stretching (various dir.)	
Rest Standing	Trunk Bending Sideways	
Stretch Outw. Lunge St.	Forward Heel Raising	Leg Exercises.
Forward Bend, Toe St.	Knee Bending to Sitting With Arm Striking Sideways	
Bend Standing	Trunk Bending Backward	Trunk Exercises.
Stretch, Stride St	Trunk Bending Forward and Downward	
Stoop Falling	Arm Bending and Stretching	Arm and Abdominal Exercises.
Stoop Falling	Arm Bending with Leg Raising Backward	
Yard Standing	Leg Raising Sideways	Balance Exercises.
Stretch Standing	Leg Raising Backward	
Wing, Outward Walk St.	Heel Raising and Knee Bending	
Reach Standing	Arm Swing. Upward and Forward	Dorsal Exercises.
Bend, Stoop St	Arm Stretch. Upward and Sidew.	
Wing Lying	Trunk Bending Forward	Abdominal Exercises.
Rest Lying	Leg (Legs) Raising Forward	
Half Stretch St	Trunk Bending Sideways	Lateral Trunk Exercises.
Rest, Forw. Walk St.	Trunk Twisting	
Stretch, Outw. Lunge St.	Trunk Bending Sideways	
Standing	Jumping in Height	Jump Exercise.
Standing	Foot Placing (Trunk Bending)	Closing Exercises.
Wing Standing	Arm Striking	
Yard Standing	Head Bending Backward	
St. (Breathing Exercise)	Arm Circling	

SETTING-UP EXERCISES

SETTING-UP EXERCISES

ARRANGED BY L. H. MANG

Head-Master, Physical Training, U. S. Naval Academy

TESTS C, B, A

Setting-Up Exercises

833. The Standing Position is taken on the command:

Attention!

Heels on the same line and as near each other as the conformation of the man permits.

FIG. 481. Attention.
Front View

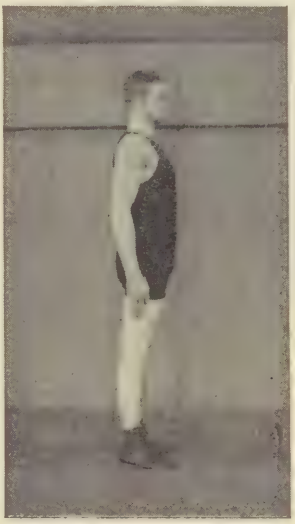

FIG. 482. Attention.
Side View

Feet turned out equally and forming an angle of about 45°.

Knees straight without stiffness.

Hips level and drawn back slightly; body erect and resting equally on hips; chest lifted and arched; shoulders square and falling equally.

Arms and hands hanging naturally; thumb along the seam of the trousers.

Head erect and squarely to the front, chin drawn in so that the axis of the head and neck is vertical; eyes straight to the front.

Weight of the body resting equally upon the heels and balls of the feet.

Note.—The position of Attention is a very important one, as all exercises start from this position. Instructors should criticize the position of Attention with such remarks as, heads up, chin in, chest high, knees straight.

FIG. 483. Wing Standing

FIG. 484. Yard Standing

Simple Starting Positions of the Arms

834. Wing Standing Position is taken on the command:

Hips—Firm.

The arms are bent upward and placed on the hips; fingers to the front, thumbs to the rear; palms of hands turned inward and pressing against the ridge of the hip bone; elbows pointing out to the side and slightly drawn back. (Fig. 483.)

Standing Position is returned to on the command:

Arms Downw.—Stretch!

The arms are stretched downward with force the shortest way.

Common faults:

Elbows not pointed to the side and drawn back too much.

Hands not firm on the hips.

835. Yard Standing Position is taken on the command:

Arms Sidew.—Raise!

The arms, fully stretched, are slowly raised sideways to the horizonal; fingers closed and the palms of hands turned downward. (Fig. 484.)

Standing position is returned to on the command:

Arms Downw.—Sink!

The arms are slowly lowered to the sides.

Common faults:

Arms not held in the horizontal position.

Chest relaxed during the movement and not held high.

Note.—If Standing Position is to be returned to quickly, command:

Attention!

The arms are then lowered to the sides with a swing without slapping the sides.

FIG. 485. Reach Standing

836. Reach Standing Position is taken on command:

Arms Forw.—Raise!

The arms fully stretched are slowly raised forward to the horizontal; fingers closed and palms of hands turned inward toward each other. (Fig. 485.)

Standing Position is returned to on the command:

Arms Downw.—Sink!

The arms are slowly lowered forward to the sides.

If the command *Attention* is given the arms are swung down quickly as in preceding paragraph.

Common faults:

As in preceding paragraph and palms not turned inward.

837. Bend Standing Position is taken on the command:

Arms—Bend!

The arms at the elbows are quickly bent upward to the shoulders; fingers touching the point of the shoulders; elbows drawn back and down to the sides. (Fig. 486.)

Standing Position is returned to on the command:

Arms Downw.—Stretch!

FIG. 486. Bend Standing

FIG. 487. Forward Bend Standing

The arms are stretched down to the sides with force the shortest way.

Common faults:

Shoulders not held firm. Elbows not drawn in to the sides.

Fingers not resting on the shoulders.

Note.—The object of the Bend Standing Position is to raise the chest, the drawing of the arms to the sides has a tendency to do this and the result is a good brace.

838. Forward Bend Standing Position is taken on the command:

Arms Forw.—Bend!

The arms are bent quickly upward in front of the chest; elbows at the height of shoulders and drawn well back; fingers closed; wrist and forearm in a straight line. (Fig. 487.)

Standing Position is returned to on the command:

Arms Downw.—Stretch!

The arms are quickly stretched downward with force to the sides.

Common faults:

Elbows not at the height of shoulders and drawn back enough.

Wrist and forearm not in straight line. Shoulders carried forward.

FIG. 488. Stretch Standing

FIG. 489. Rest Standing

839. Stretch Standing Position is taken on the command:

Arms Forw. and Upw.—Raise!

The arms fully stretched are raised forward and upward in front of the body to the vertical position above the head, and are carried well back so they are in a straight line with the curve of the spine; palms of hands turned inward toward each other and arms shoulder width apart. (Fig. 488.)

Standing Position is returned to on the command:

Arms Forw. and Downw.—Sink!

The arms are slowly lowered in the reverse manner to the sides.

Stretch Standing Position can also be taken by raising the arms sideways and upward on the command:

Arms Sidew. and Upw.—Raise!

The arms are raised sideways to the Yard Position, as in par. 839, the hands are quickly turned upward and the movement continued upward.

Arms Sidew. and Downw.—Sink!

The arms are lowered in the reverse manner to the sides.

Common faults:

Arms not held straight and in line with the trunk.

Arms not held shoulder width apart.

840. Rest Standing Position is taken on the command:

Neck—Rest!

FIG. 490. Palm Standing

FIG. 491. Close Standing

The arms are bent quickly at the elbows, carried upward the shortest way and placed on the back of head with the finger tips touching each other; elbows well back, chest high and head erect. (Fig. 489.)

Standing position is returned to on the command:

Arms Downw.—Stretch!

The arms are stretched downward to the sides with force the shortest way.

Common faults:

The head carried forward during the arm movement.

The elbows not carried back enough.

Fingers interlocked.

841. Palm Standing Position is taken on the command:

Hands Outw.—Turn!

With the arms fully stretched and held close to the body, the hands are turned outward away from the body as far as possible. (Fig. 490.)

Standing Position is returned to on the command:

Hands Inw.—Turn!

The hands are turned inward toward the body.

Common faults:

Arms not held close to the body. Shoulders carried forward.

FIG. 492. Outward Walk Standing

FIG. 493. Forward Walk Standing

Simple Starting Positions of the Legs

842. Close Standing Position is taken on the command:

Feet—Close!

By slightly raising the toes from the deck and pivoting on the heels the feet are carried inward so the inner side of the feet touch. (Fig. 491.)

Standing Position is returned to on the command:

Feet—Open!

By pivoting on the heels the feet are turned out to the Standing Position.

Common faults:

Bending the body forward at the waist line.

Dragging the feet on the deck during the closing and opening.

843. Outward Walk Standing Position is taken on the command:

Left (R.) Foot Outw.—Place.

The named foot is placed two foot lengths outward in the direction that the foot is pointed, 45° angle to the front; weight of the body equally distributed on both feet and shoulders square to the front. (Fig. 492.)

Standing Position is returned to on the command:

Feet Together—Place!

By pushing from the deck with the forward foot it is carried back to the Standing Position.

Common faults:

Not keeping the shoulders square to the front.

Not preserving the angle of the feet. Weight not equally distributed.

844. Forward Walk Standing Position is taken on the command:

Left (R.) Foot Forw.—Place!

The named foot is placed two foot lengths directly forward so that the heels are in a straight line; weight of the body equally distributed and preserving the angle of the feet. (Fig. 493.)

Standing Position is returned to on the command:

Feet Together—Place!

The feet are placed together as in preceding paragraph.

FIG. 494. Outward Lunge Standing

Common faults:

Besides those in preceding paragraph, the foot not placed directly forward.

845. Outward Lunge Standing Position is taken on the command:

Left (*R.*) *Foot Outw.*—Lunge!

The named foot is carried outward three foot lengths in the same direction as in par. 843, the forward knee is bent to a right-angle and directly over the foot, both feet flat on the deck; rear leg, trunk, and head in a straight line, with the upper body inclined forward and shoulders square to the front, as in the Standing Position. (Fig. 494.)

Standing Position is returned to on the command:

Feet Together—Place!

FIG. 495. Forward Lunge Standing

By pushing off with the forward foot it is carried back to the Standing Position.

Common faults:

Not stepping out three foot lengths and feet not flat on the deck.

Rear leg and body not in a straight line.

846. Forward Lunge Standing Position is taken on the command:

Left (*R.*) *Forw.*—Lunge!

The named foot is carried three foot lengths forward, the knee bent to a right-angle as in preceding paragraph, shoulders square to the front; rear leg and trunk in a straight line; feet flat on the deck. (Fig. 495.)

Standing Position is returned to on the command:

Feet Together—Place!

The foot is carried back to the Standing Position as in preceding paragraph.

Common faults:

Besides those in preceding paragraph, the foot not carried straight forward and the rear heel raised from the deck.

847. Stride Standing Position is taken on the commands (three methods):

(a) *Left (R.) Foot Sidew.*—Place!

(b) *Feet Sidew.*—Place!

(c) *Feet Sidew. with a Jump*—Place!

(a) The named foot is carried directly sideways two foot lengths and placed on the deck; equal weight on both feet. (Fig. 496.)

(b) The left foot is carried one foot length to the left, and the right one foot length to the right; the distance between the heels should be at least two foot lengths. (Fig. 496.)

(c) By pushing off from the deck and springing upward the legs are parted sideways and the feet placed on the deck; the distance between the heel should be at least two foot lengths. (Fig. 495.)

Standing Position is returned to on the commands:

(a-b) *Feet Together*—Place!

(c) *Feet Together with a Jump*—Place!

(a) The foot which was placed sideways is carried back to the Standing Position.

(b) Two Motions.

The left foot is carried in one foot length and the right foot is carried likewise to the Standing Position.

(c) By pushing off from the deck both feet are carried inward to the Standing Position.

Common faults:

Not making the stride long enough.

Body swaying and sliding feet on deck.

848. Toe Standing Position is taken on the command:

Heels—Raise!

With the heels together and the arms held to the sides, the body is raised as high as possible on the toes, maintaining the balance; ankle joints stretched; chest held high and head erect. (Fig. 497.)

Standing Position is returned to on the command:

Heels—Sink!

The heels are lowered to the deck.

Common faults:

Body swaying and heels not held together.

FIG. 496. Stride Standing

FIG. 497. Toe Standing

849. Spring Standing Position is taken on the commands:

Heels—Raise! (See preceding paragraph.) *Knees*—Bend!

Maintaining the balance the knees are bent downward until the upper leg and lower leg are at right-angles to each other; the position of the rest of the body unaltered. (Fig. 498.)

Standing Position is returned to on the commands:

Knees—Stretch!

Keeping the heels clear of the deck the knees are stretched upward.

Heels—Sink!

The heels are lowered to the deck.

Common faults:

Heels lowered during the knee bending and stretching.

Body swaying forward or backward and not maintaining the balance.

850. Spring Sitting Position is taken on the commands:

Heels—Raise! (Par. 849.) *Knees to Sitting*—Bend!

The knees are bent as in preceding paragraph, but with the difference that the knees are bent still further downward until the thighs touch the heels. (Fig. 499.)

Standing Position is returned to as in preceding paragraph on the commands:

Knees—Stretch! *Heels*—Sink!

Common faults:

Besides those in preceding paragraph, knees not bent enough.

FIG. 498. Spring Standing

FIG. 499. Spring Sitting

Starting Positions of the Trunk.

851. Stoop Standing Position is taken on the command:

Trunk Forw.—Bend.

With the knees straight and the arms held to the sides, the trunk is slowly lowered forward to the horizontal so that the trunk and legs are at right-angles to each other. (Fig. 500.)

Standing position is returned to on the command:

Trunk Upw.—Stretch!

The trunk is raised slowly upward to the Standing Position.

Common faults:

The back rounded and head allowed to fall forward.

The knees not held straight and chin not drawn in.

852. Arch Standing Position is taken on the command:

Trunk Backw.—Bend!

With the knees straight and arms held at the sides, the trunk is bent slowly backward; the bending takes place in the upper spine; the chest should be held high and the chin drawn in. (Fig. 501.)

Standing position is returned to on the command:

Trunk Upw.—Stretch!

The trunk is raised slowly upward to the Standing Position.

Common faults:

The bending taking place in the lower spine instead of the upper spine.

The chin not draw in and the head allowed to fall backward.

FIG. 500. Stoop Standing

FIG. 501. Arch Standing

853. Twist Standing Position is taken on the command:

Trunk to the Left (*R.*)—Twist!

With the arms held to the sides, the trunk is slowly twisted to the named side as far as possible, keeping the hips square to the front. The twisting takes place above the hips and not in the thighs. (Fig. 502.)

Standing Position is returned to on the command:

Trunk Forw.—Twist!

The trunk is slowly twisted forward to the Standing Position.

Common faults:

The twisting taking place in the thighs instead of the trunk.

The hips not held square to the front.

854. Sidebend Standing Position is taken on the command:

Trunk to the Left (*R.*)—Bend!

With the arms held to the sides, chin drawn in and the feet firm on the deck, the trunk is slowly bent to the named side as far as possible. The position of the head is unaltered to the trunk. (Fig. 503.)

Standing Position is returned to on the command:

Trunk Upw.—Stretch!

The trunk is slowly raised upward to the Standing Position.

FIG. 502. Twist Standing

FIG. 503. Sidebend Standing

Common faults:

Raising the opposite foot to the side of the bending off the deck.

Not keeping the head in line with the curve of the spine.

Twisting the trunk during the sidebending.

Miscellaneous Starting Positions

855. Stoop Falling Position is taken on the command:

Stoop Falling—Place!

(Two motions):

1. The knees are bent to sitting, as in par. 850, and the hands are placed on the deck between the knees, keeping them shoulder width apart; the head is held high, and the back straight. The name of this position is called Crouch Sitting Position. (Fig. 504.)

2. The weight is taken on the arms and the legs are stretched backward with force, the feet placed on the deck so that the body is in an inclined position, the arms are held straight, the legs, trunk and head in a straight line. (Fig. 506.)

FIG. 504. Crouch Sitting

Standing position is returned to on the command:

Attention!

(Two motions:)

1. By pushing off with the feet the legs are brought forward to Crouch Sitting Position.

2. By pushing off with the hands and stretching the knees, the body is straightened up to the Standing Position.

Common faults:

In Crouch Sitting: The back rounded and the head carried forward.

In Stoop Falling: Legs and trunk not in a straight line, allowing back to sway or raising hips.

Sliding feet along the deck.

856. Crouch Sitting Position is taken on the command:

Crouch Sitting—Place!

The knees are bent and the hands placed on the deck as in preceding paragraphs. (Fig. 506.)

Standing Position is returned to on the command:

Attention!

Common faults: (See preceding paragraph.)

857. Back Stoop Falling Position is taken on the commands:

(Two motions:)

1. *Stoop Falling*—Place! (See preceding paragraph.)

2. *Change to Back Stoop Falling on Left (R.) Arm*—Turn!

By keeping the arms straight, the body is turned on the named arm and the free hand placed on the deck about 18 inches from the other hand. The body is now in an inclined position, with the trunk, legs and head in straight line as in the Standing Position. The back of the body is toward the deck. (Fig. 507.)

FIG. 506. Stoop Falling

FIG. 507. Back Stoop Falling

Standing Position is returned to in two motions on the commands:

1. *Change to Stoop Falling on Left (R.) Arm*—Turn!

The body is turned on the named arm back to the Stoop Falling Position.

2. *Attention!* (See preceding paragraph.)

Common faults:

Besides those in pars. 854, 855, the arms not held straight and the body allowed to hinge at the waist line.

The head carried forward and not in line with the trunk.

858. Side Falling Position is taken on the commands: (two motions:)

1. *Stoop Falling*—Place! (See par. 856.)

2. *Change to Side Falling on Left* (*R.*) *Arm*—Turn!

The body is turned on the named arm until the side of the body is turned toward the deck, the free arm is held to the side and the supporting arm is held straight. The body should now be in an inclined position, with the head, trunk and legs in a straight line as in the Standing Position (Fig. 508.)

FIG. 508. Side Falling

Standing Position is returned to in the reversed manner in two motions on the commands:

1. *Change to Stoop Falling on Left* (*R.*) *Arm*—Turn!

2. *Attention!*

Common faults:

The body and arm are not held straight.

Chin not drawn in and head carried to the side.

Legs not held together as in Standing Position.

859. Lying Position is taken on the commands: (Two motions:)

1. *Stoop Falling*—Place! (See par. 855.)
2. *Change to Lying on Left (R.) Arm*—Turn!

The body is turned on the named arm to the Back Stoop Falling Position, as in par. 857, then immediately lowered to the deck so that the back of the body is flat on the deck with the arms to the sides and the legs together. (Fig. 509.)

FIG. 509. Lying

Standing Position is returned to in the reversed manner, in two motions, on the commands:

1. *Change to Stoop Falling on Left (R.) Arm*—Turn!
2. *Attention!*

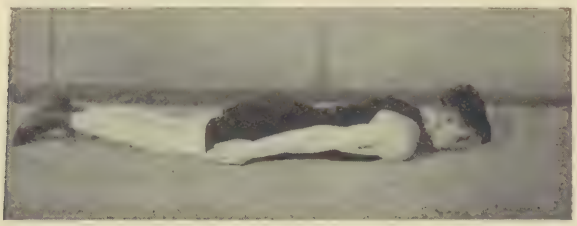

FIG. 510. Forward Lying

Common faults:

Besides those in pars. 855, 856, the legs apart and arms not at the sides

860. Forward Lying Position is taken on the commands:
(Two motions:)

1. *Stoop Falling*—Place! (See par. 855.)
2. *Change to Forw. Lying*—Place!

The body is quickly lowered to the deck and the arms lowered to the sides. The body should now be in a horizontal position on the deck with the chin drawn in and the legs together. (Fig 510.)

Standing Position is returned to in the reversed manner in two motions on the commands:

Change to Stoop Falling—Place! *Attention!*

Note.—The above position can also be taken on the command:

Forw. Lying—Place!

Common faults:

The front of the body not flat on the deck and arms not held to sides.

Legs apart and chin not draw in.

861. Stride Kneeling Position is taken on the commands: *Stride Kneeling*—Place!

(Two motions:)

1. The right knee is bent and the left knee placed on the deck about inches to the left of the right foot, Half Kneeling.

FIG. 511. Stride Kneeling

FIG. 512. Wing Stride Standing

2. The right knee is placed on the deck about 6 inches to the right, so that the distance between the knees is about 12 inches. The body from the knees up should be held straight and heels together. (Fig. 511.)

Standing Position is returned to on the command:

Attention!

(Two motions:)

1. The left knee is raised and the foot placed on the deck opposite the right knee, both hands are placed on the left knee.

2. By stretching the knees the body is raised to the Standing Position and the arms lowered to the sides.

Common faults:

Hinging of the body at the waist line.

Touching the deck with the hands in taking the position.

Heels not together when in the Kneeling Position.

Combined Starting Positions of the Arms and Legs

862. Wing Stride Standing Position is taken on the commands:

Left (R.) Foot Sidew. and Hips—Firm!

The named foot is placed sideways, as in par. 847, and at the same time the hands are placed on the hips, as in par. 834. (Fig. 512.)

Standing Position is returned to on the commands:

Feet Together and Arms Downw.—Stretch!

The foot is carried in to the other foot and at the same time the arms are stretched down to the sides.

Common faults: (See pars. 847-834.)

863. Bending Toe Standing Position is taken on the commands:

Heel Raising and Arms—Bend!

FIG. 513. Bend Toe Standing

The heels are raised, as in par. 848, and at the same time the arms are bent upward to the Bend Position, as in par. 837. (Fig. 486.)

Standing Position is returned to on the command:

Heel Sinking and Arms Downw.—Stretch!

The heels are lowered to the deck and at the same time the arms are stretched down to the sides.

Common faults: (See pars. 848-837.)

864. Rest Outward Walk Standing Position is taken on the command:

Left (R.) Foot Outw. and Neck—Rest!

The named foot is placed outward, as in par. 843, and at the same time the arms are bent upward to the Rest Position, as in par. 840. (Fig. 489.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

The foot is carried back to the other foot and at the same time the arms are stretched down to the sides.

Common faults: (See pars. 843-840.)

865. Stretch Outward Lunge Position is taken on the command:

Left (R.) Foot Outw. Lunging and Arms Forw. and Upw.—Raise!

The named foot is shifted outward, as in par 845, at the same time the arms are raised forward and upward in front of the body to the vertical position above the head, as in par. 839. (Fig. 488.)

FIG. 514. Rest Outward Walk Standing

FIG. 515. Stretch Outward Lunge Standing

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

The advanced foot is carried back to the other foot and at the same time the arms are lowered forward and downward to the sides.

Common faults: (See pars. 845-839.)

Note.—The Stretch Position can also be taken by raising the arms sideways and upward. (See par. 839.)

Exercises of the Legs Carried Out in the Simple Starting Positions

The Starting Position. The Exercise.

866. Wing Standing.....Heel Raising

The Starting Position is taken, as in par. 834, on the command:

Hips—Firm!

The exercise is carried out, as in par. 848 on the commands:

Heels—Raise! *Heels*—Sink!

Then the heel raising is carried out by numbers: at count "One" the heels are raised, at count "Two" they are lowered, and so on.

Common faults: (See pars. 834-868.)

867. Yard Stride Standing.....Heel Raising

The Starting Position is taken on the command:

Left (*R.*) *Foot Sidew. and Arms Sidew.*—Raise!

The named foot is shifted sideways, as in par. 847, at the same time the arms are raised sideways, as in par. 835.

The exercise is carried out as in par. 848.

Standing Position is returned to in the reversed manner on the command:

Feet Together and Arms Downw.—Sink!

Common faults: (See pars. 847-835-848)

868. Wing, Outward Walk St.....Heel Raising

The Starting Position is taken on the command:

Left (*R.*) *Foot Outw. and Hips*—Firm!

The named foot is placed outward, as in par. 843, and at the same time the hands are placed on the hips. (Fig. 483.)

The exercise is carried out as in par. 848.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

The named foot is shifted back to the other foot and at the same time the arms are stretched down to the sides.

Common faults: (See pars. 843-848.)

869. Yard, Forward Walk St.....Heel Raising.

The Starting Position is taken on the command:

Left (*R.*) *Foot Forw. and Arms Sidew.*—Raise!

The named foot is placed forward as in par. 844 and at the same time the arms are raised sideways as in par. 834.

The heel raising is carried out as in par. 848.

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Sink!

The named foot is shifted back and the arms lowered to the sides.

Common faults: (See pars. 844-834-848.)

FIG. 516. Wing Outward Walk Standing

870. Wing Standing.....Heel Raising and Knee Bending.
Starting Position is taken on the command:
Hips—Firm! (Par. 834.)

The exercise is carried out on the commands:

Heels—Raise! (Par. 848.) *Knees*—Bend! (Par. 849, Fig. 498.)
Knees—Stretch! *Heels*—Sink!

Then the exercise is carried out by numbers: at "One" the heels are raised, at "Two" the knees are bent, at "Three" the knees are stretched, at "Four" the heels are lowered, and so on.

Standing Position is returned to on the command:
Arms Downw.—Stretch!

Common faults: (See pars. 834-848-849.)

871. Yard Standing: Heel Raising and Knee Bending to Sitting.
Starting Position is taken on the command:
Arms Sidew.—Raise! (See par. 835.)

The exercise is carried out as in the preceding paragraph, but with the difference that the knees are bent to sitting, as in par. 850, on the commands:

Heels—Raise! *Knees to Sitting*—Bend!
Knees—Stretch! *Heels*—Sink!

Standing Position is returned to on the command:
Arms Downw.—Sink! (See par. 835.)

Common faults: (See pars. 835-850-835.)

872. Wing Standing.....Lunging Outward.

Starting Position is taken on the command:
Hips—Firm! (See par. 834.)
The exercise is carried out on the commands:
Left (R.) Foot Outw.—Lunge! (See par. 845.)
Feet Together—Place!
Then the exercise is carried out by numbers.
Standing position is returned to on the command:
Arms Downw.—Stretch!

Common faults: (See pars. 834-845.)

873. Bend Standing.....Lunging Forward.

Starting Position is taken on the command:
Arms—Bend! (See par. 837.)
The exercise is carried out on the commands:
Left (R.) Foot Forw.—Lunge! (See par. 846.)
Feet Together—Place!
Standing position is returned to on the command:
Arms Downw.—Stretch!

Common faults: (See pars. 837-846.)

874. Wing Standing.....Advance by Lunging Forward.

Starting Position is taken on the command:
Hips—Firm! (See par. 834.)
The exercise is carried out on the commands:
Advancing Forwd. by Numbers—One Two! Three! Four!

At count "One," the left foot is shifted forward, as in par. 846; at "Two," the right foot is shifted forward to the left foot; at "Three," the right foot is shifted forward; and at "Four," the left foot is carried forward to the right, and so on.

Then the class is faced about and the exercise repeated.
Standing Position is returned to on the command:
Arms Downw.—Stretch!

Common faults:

The class not working in unison and not keeping the proper dress in ranks while advancing forward.

Exercises of the Arms Carried Out in the Simple Starting Positions

The Starting Position. The Exercise.

875. Standing.....Arm Stretching Sideways.

The exercise is carried out on the command:

Arms Sidew.—Stretch!

(Two Motions:)

1. The arms are bent upward to the Bend position as in par. 837.

2. The arms are stretched sideways to the horizontal position, with the palms of the hands turned downward as in par. 835.

Standing position is returned to on the command:

Arms Downw.—Stretch!

(Two motions:)

1. The arms are carried in to the Bend Position with a snap.

2. The arms are stretched downward with force to the sides.

Note.—The movement of all arm stretchings is continuous, with very little pause at the Bend Position.

Common faults:

The arms not fully stretched and the palms not turned downward.

Not enough snap and effort in the bending movement.

876. Standing.....Arm Stretching Upward.

The exercise is carried out on the command:

Arms Upw.—Stretch!

(Two motions:)

1. The arms are bent upward, as in preceding paragraph.

2. The arms are stretched upward to the vertical position above the head, with palms turned inward and arms shoulder width apart.

Standing position is returned to on the command:

Arms Downw.—Stretch!

(Two motions:)

1. The arms are carried in to the Bend Position with a snap.

2. The arms are stretched downward with force to the sides.

Note.—After Arm Stretchings are carried out by command, they are executed by numbers, one count for each movement.

Common faults:

Arms not stretched upward with force and held shoulder width apart.

Palms of hands not turned inward.

877. Standing.....Arm Stretching Forward.

The exercise is carried out on the command:

Arms Forw.—Stretch!

(Two motions:)

1. The arms are bent upward, as in par. 837.

2. The arms are stretched forward to the horizontal position in front of the body; palms of hands turned inward and arms shoulder width apart as in par. 836.

Standing position is returned to on the command:

Arms Downw.—Stretch!

The arms are stretched downward in two motions, as in preceding paragraph.

Common faults: (See preceding paragraph.)

878. Standing.....Arm Stretching Backward.

The exercise is carried out on the command:

Arms Backw.—Stretch!

(Two motions:)

1. The arms are bent upward, as in par. 837.

2. The arms are stretched downward and backward with force; the hands are held shoulder width apart and the palms are turned inward.

The position arising from the Arm Stretching Backward is called Drag Standing.

Standing Position is returned to on the command:

Arms Downw.—Stretch!

The arms are stretched downward in two motions, as in preceding paragraph.

Common faults:

The head carried forward as the arms are stretched backward.

The arms not carried back far enough.

879. Forward Bend St.....Arm Striking Sideways.

Starting Position is taken on the command:

Arms Forwd.—Bend! (See par. 838.)

The exercise is carried out on the commands:

Arms Sidew.—Strike!

The arms are stretched sideways to the Yard Position. (Fig. 484.)

The upper arms are held in a firm position.

Arms Forw.—Bend!

The arms are carried in to the first position.

Then the Arm Striking is carried out by numbers.

Standing Position is returned to on the command:
Arms Downw.—Stretch!

Common faults:

The upper arms not held firm during the Arm Striking.

880. Bend Standing: Arm Stretching in Various Directions.
Starting Position is taken on the command: *Arms*—Bend!
The exercise is carried out on the commands:
Arms Sidew.—Stretch! *Arms*—Bend! (See par. 837-835.)
Arms—Upw.—Stretch! *Arms*—Bend! (See par. 837-839.)
Arms Forw.—Stretch! *Arms*—Bend! (See par. 837.)
Arms Backw.—Stretch! *Arms*—Bend! (See par. 837.)
Standing Position is returned to on the command:
Arms Downw.—Stretch!

Common faults: (See pars. 837-835-839.)

881. Reach Standing:.....Arm Swinging Upward and Forward.
Starting position is taken on the command:
Arms Forw.—Raise!
The exercise is carried out on the commands:
Arms Upw.—Swing!
The arms are swung upward to the Stretch Position. (Fig. 488.)
Arms Forw.—Swing!
The arms are swung forward to the Reach Position. (Fig. 485.)
Standing Position is returned to on the command:
Arms Downw.—Sink!

Note.—All Arm Swingings are carried out by numbers after being executed by command.

882. Stretch Standing.....Arm Swinging Forward and Upward.
Starting Position is taken on the command:
Arms Forw. and Upw.—Raise! (See par. 840.)
The exercise is carried out on the commands:
Arms Forw.—Swing! *Arms Upw.*—Swing!

As in the preceding paragraph, but with the difference that the arms are swung first to the Reach and then to the Stretch Position.

Standing Position is returned to on the command:
Arms Forw. and Downw.—Sink!

883. Reach Standing.....Arm Swinging Sideways.
Starting Position is taken on the command:
Arms Forw.—Raise!

The exercise is carried out on the commands:

Arms Sidew.—Swing!

The arms are swung sideways to the Yard Position, palms turned downward as in par. 835.

Arms Forw.—Swing!

The arms are swung forward to the Reach Position, palms turned inward.

Standing Position is returned to on the command:

Arms Downw.—Sink!

Common faults:

The head carried forward during the Arm Swinging Sideways.

884. Yard Standing.....Arm Swinging Forward.

Starting Position is taken on the command:

Arms Sidew.—Raise!

The exercise is carried out on the commands:

Arms Forw.—Swing! *Arms Sidew.*—Swing!

As in the preceding paragraph, but with the difference that the arms are first swung to the Reach and then to the Yard Position.

Standing Position is returned to on the command:

Arms Downw.—Sink!

Common faults: (See preceding paragraph.)

885. Standing.....Arm Swinging Forward and Upward.

The exercise is carried out on the commands:

Arms Forw. and Upw.—Swing!

The arms are swung forward and upward in front of the body to the Stretch Position.

Arms Forw. and Downw.—Swing!

The arms are swung forward and downward in the reversed manner to the Standing Position.

Common faults:

The arms not held straight and shoulder width apart.

The arms allowed to swing beyond the thighs in the downward swing.

886. Standing.....Arm Swinging Sideways and Upward.

The exercise is carried out on the commands:

Arms Sidew. and Upw.—Swing! *Arms Sidew. and Downw.*—Swing!

As in preceding paragraph, but with the difference that the arms are swung sideways and upward and then sideways and downward.

Common faults:

Besides those in preceding paragraph, the arms allowed to slap the thighs in the downward swing.

887. Standing.....Arm Circling with a Swing.
The exercise is carried out on the commands:
Arms Forw. and Upw.—Swing! *Arms Sidew. and Downw.*—Swing!
Common faults: (See par. 839.)

888. Half Stretch St.....Arm Changing with a Swing.
Starting Position is taken on the command:
Left (R.) Arm Forw. and Upw.—Raise! (See Fig. 517.)
The exercise is carried out by numbers on the command:
Arm Changing with a Swing by Numbers—One! Two!
At "One," the arm above the head is swung forward and downward and at the same time the other arm is swung forward and upward.

FIG. 517. Half Stretch Standing

FIG. 518. Yard (A) Standing

At "Two," the arms are changed in the reversed manner, and so on.
Standing Position is returned to on the command:
Left (R.) Arm Forw. and Downw.—Sink!
Common faults: See par. 839.
The arms not held straight during the swinging.
The head carried forward and the shoulders not held firm.

889. Stretch Standing.....Arm Parting.
The Starting Position is taken on the command:
Arms Forw. and Upw.—Raise! (Par. 839.)

The exercise is carried out on the command:

Arm Parting by Numbers—One! The arms are quickly parted and lowered to the Yard (A) Position, with palms turned upward.

Two! They are quickly swung upward to the first position, and so on.

Standing Position is returned to on the command:

Arms Forw. and Downw.—Sink.

Common faults:

The arms not held straight and the head carried forward.

FIG. 519. Head Bending Backward

FIG. 520. Head Bending Forward

890. Yard (A) Standing . . . . . Arm Parting.

The Starting Position is taken on the commands:

Arms Sidew.—Raise! (Par. 835.)

Hands Upw.—Turn!

With the arms held straight the hands are quickly turned upward to the Yard (A) Position. (Fig. 518.)

The arm parting is then carried out by numbers as in the preceding paragraph, but with the difference that the arms are raised upward and then sideways.

Standing Position is returned to on the commands:

Hands Downw.. Turn! *Arms Downw.*—Sink!

Common faults: (See preceding paragraph.)

Exercises of the Neck Carried Out in the Simple Starting Positions.

The Starting Position. The Exercise.

891. Wing Standing.....Head Bending Backward (Forward).

Starting Position is taken on the command:

Hips—Firm!

The exercise is carried out on the commands:

Head Backw. (*Forw.*)—Bend!

The head is bent backward (forward) as far as possible; the chin is drawn in and the shoulders held firm. (Figs. 519 and 520.)

FIG. 521. Head Bending Sideways

Head Upw.—Stretch!

The head is raised upward to the Standing Position.

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Common faults:

Chin not drawn in and the shoulders not firm.

Note.—Head Bending can also be carried out in the Bend, Yard or Forward Bend Standing Positions.

892. Wing Standing.....Head Bending Sideways.

Starting Position is taken on the command:

Hips—Firm!

The exercise is carried out on the commands:
Head to the Left (*R.*)—Bend!

The head is slowly bent to the named side as far as possible, the shoulders are held firm and the chin is drawn in. (Fig. 521.)

Head Upw.—Stretch!
The head is slowly raised to the Starting Position.
Standing Position is returned to on the command:
Arms Downw.—Stretch!

Note.—Head Bending Sideways can also be carried out in the Bend, Yard or Forward Bend Standing Positions.

893. Wing Standing.....Head Twisting.
Starting Position is taken on the command:
Hips—Firm!
The exercise is carried out on the commands:
Head to the Left (*R.*)—Twist!
The head is twisted to the named side as far as possible, keeping the head erect and the chin drawn in. (Fig. 522.)
Head Forward—Twist!
The head is slowly twisted forward to the Standing Position.
Standing position is returned to on the command:
Arms Downw.—Stretch!

Notes.—Head Twisting can also be carried out in the Wing, Bend, Yard, and Spring Sitting Positions. All Head Bendings and Twistings should be carried out by numbers after being executed by command.

Exercises of the Trunk Carried Out in the Simple Starting Positions.

The Starting Position. The Exercise.
894. Rest Standing.....Trunk Bending Backward.
Starting Position is taken on the command:
Neck—Rest!
The exercise is carried out on the commands:
Trunk Backw.—Bend! *Trunk Upw.*—Stretch! (See par. 852.)
Standing Position is returned to on the command:
Arms Downw.—Stretch!

Notes.—Trunk Bending Backward should always be followed by Trunk Bending Forward.

Trunk Bending Backward can also be carried out in the Wing, Bend, Yard or Stretch Standing Positions.

895. Wing Standing.....Trunk Bending Forward.

Starting Position is taken on the command:

Hips—Firm!

The exercise is carried out on the commands:

Trunk Forw.—Bend! *Trunk Upw.*—Stretch! (See par. 851.)

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Trunk Bending Forward can also be carried out in the Bend, Yard, Stretch or Forward Bend Standing Positions.

Common faults: (See par. 851.)

FIG. 522. Head Twisting

896. Yard Standing.....Trunk Bending Sideways.

Starting Position is taken on the command:

Arms Sidew.—Raise! (Par. 835.)

The exercise is carried out on the commands:

Trunk to the Left (R.)—Bend! (See par. 854.)

Trunk Upw.—Stretch!

Standing Position is returned to on the command:

Arms Downw.—Sink!

Note.—Trunk Bending Sideways can also be carried out in the Wing, Rest, Bend, Stretch or Forward Bend Standing Positions.

Common faults: (See par. 854.)

897. Rest Standing.....Trunk Twisting

Starting Position is taken on the command:

Neck—Rest! (Par. 840.)

The exercise is carried out on the commands:

Trunk to the Left (R.)—Twist! (Par. 853.)

Trunk Forw.—Twist!

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Trunk Twisting can also be carried out in the Bend, Yard, Wing, Forward Bend or Stretch Standing Positions.

Common faults: (See par. 853.)

FIG. 523. Stretch Point Stoop Standing

898. Stretch Standing: Trunk Bending Forward and Downward.

Starting Position is taken on the command:

Arms Forw. and Upw.—Raise! (Par. 839.)

The exercise is carried out on the commands:

Trunk Forw. and Downw.—Bend!

The trunk is lowered, as in par. 851, but with the difference that the forward bending is carried still further, so that the upper body is beyond the horizontal. (Fig. 523.)

Trunk Forw. and Upw.—Stretch!

The body is raised to the Stretch Position.

Standing Position is returned to on the command:

Arms Forw. and Downw.—Sink!

Common faults:

The arms not held in line with the trunk during the bending.

900. Half Stretch Standing.....Trunk Bending Sideways.

Starting Position is taken as in par. 898 on the command:

Left (R.) Arm Forw. and Upw.—Raise!

The exercise is carried out on the commands:

Trunk to the Right (L.)—Bend! (See par. 854.)

Trunk Upw.—Stretch!

Then Arm Changing is executed on the command:

Arms Change—Stretch!

(Two motions:)

1. Both arms are carried to the Bend Position.

2. The right arm is stretched upward and the left arm is stretched downward and the exercise carried out on the other side.

Standing Position is returned to on the command:

Right (L.) Arm Forw. and Downw.—Sink!

Note.—In the Half Stretch Position Trunk Bending Sideways is always carried out to the side of the down-stretched arm.

Common faults: (See par. 854.)

Balance Exercises

The Starting Position. The Exercise.

901. Wing Standing.....Knee Upbending.

Starting Position is taken on the command:

Hips—Firm!

The exercise is carried out on the command:

Left (R.) Knee Upw.—Bend!

The named knee is bent upward in front of the body so that the upper leg is in a horizontal position and at right-angles to the lower leg, at the same time maintaining the balance. (Fig. 524.)

Feet Together—Place

The leg is stretched downward to the first position.

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Knee Upbending can also be carried out in the Bend, Forward Bend, Yard, Rest or Stretch Standing Positions.

Common faults:

The upper and lower leg not at right-angles to each other and not maintaining the balance.

902. Bend Standing.....Leg Raising Backward.

Starting Position is taken on the command:

Arms—Bend!

The exercise is carried out on the commands:

Left (R.) Leg Backw.—Raise!

The named leg is slowly raised backward as far as possible without changing the position of the rest of the body; the balance maintained and the leg fully stretched. (Fig. 525.)

Feet Together—Place!

The leg is slowly lowered to the first position.

FIG. 524. Wing Crook, Half-Standing

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Leg Raising Backward can also be carried out in the Wing, Yard, Forward Bend, Rest or Stretch Standing Positions.

Common faults:

Upper body leaning forward and not maintaining the balance.

903. Forward Bend Standing.....Leg Raising Forward.

Starting Position is taken on the command:

Arms Forw.—Bend!

The exercise is carried out on the commands:

Left (R.) Leg Forw.—Raise!

The named leg fully stretched is slowly raised forward to the horizontal position in front of the body, maintaining the balance. (Fig. 526.)

Feet Together—Place!

The leg is slowly lowered to the first position.

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Leg Raising Forward can also be carried out in the Bend, Yard, Wing, Rest or Stretch Standing Positions.

Common faults:

The body leaning backward and not maintaining the balance.

FIG. 525. Bend, Backward Walk, Half-Standing

904. Rest Standing ..... **Leg Raising Sideways.**

Starting Position is taken on the command:

Neck—Rest!

The exercise is carried out on the commands:

Left (R). Leg Sidew.—Raise!

The named leg fully stretched is slowly raised sideways as far as possible, maintaining the balance and the position of the upper body unaltered. (Fig. 527.)

Feet Together—Place!

The leg is slowly lowered to the first position.

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Leg Raising Sideways can also be carried out in the Bend, Yard, Wing, or Stretch Standing Positions.

Common faults:

The body leaning sideways and the balance not maintained.

905. Horizontal Toe Support Standing Position is taken on the commands:

Left (R.) Foot Horizontal Toe Support—Place!

FIG. 526. Forward Bend, Forward Walk, Half-Standing

By slightly bending the forward knee the named foot is carried straight backward three foot lengths, and the toes placed square on the deck; body in an inclined position, with the trunk and rear leg in a straight line and arms held to the sides. (Fig. 528.)

Feet Together—Place!

The foot is carried forward to the first position.

Common faults:

The foot not carried back three foot lengths and the forward knee not bent.

906. Horizontal Half-Standing Position is taken on the commands:

Left (R.) Foot Horizontal Half-Standing—Place!

The named foot is carried backward as in preceding paragraph, but with the difference that the foot is not placed on the deck and the leg raised backward to almost the horizontal. (Fig. 529.)

Feet Together—Place!

The trunk is raised and the leg lowered to the first position.

Common faults: (See preceding paragraph.)

FIG. 527. Rest Stride Half-Standing

Combined Exercises of the Arms and Legs Carried Out in the Standing and Simple Starting Positions.

The Starting Position. The Exercise.

907. Standing: Foot Placing Outward with Arm Raising Sideways.

Left (R.) Foot Outw. and Arms Sidew.—Raise!

The named foot is placed outward, as in par. 843, at the same time the arms are raised sideways, as in par. 835.

Feet Together and Arms Downw.—Sink!

The foot is carried in and the arms lowered to the sides.

Note.—Foot Placing Outward can also be carried out with Arm Raising Sideways and Upward or Forward and Upward, as in par. 885.

908. Standing: Foot Placing Forward with Arm Raising Forward and Upward.

The exercise is carried out on the commands:

Left (R.) Foot Forw. and Arms Forw. and Upw.—Raise!

The named foot is placed forward, as in par. 844, at the same time the arms are raised forward and upward, as in par. 885.

Feet Together and Arms Forw. and Downw.—Sink!

Note.—All Foot Placings are carried out left and right and then by numbers.

909. Bend St.: Foot Placing Forward with Arm Stretching Sideways.

Starting Position is taken on the command:

Arms—Bend!

FIG. 528. Horizontal Toe Support, Standing

The exercise is carried out on the commands:

Left (R.) Foot Forw. and Arms Sidew.—Stretch!

The named foot is placed forward, as in par. 844, at the same time the arms are stretched sideways, as in par. 880.

Feet Together and Arms—Bend!

Standing Position is returned to on the command:

Arms Downw.—Stretch!

Note.—Foot Placing Forward can also be carried out with Arm Stretching Upward or Forward.

910. Standing: Lunging Forward with Arm Swinging Forward and Upward.

Left (R.) Foot Forw. Lunging and Arms Forw. and Upw.—Swing!

The named foot is carried forward, as in par. 844, at the same time the arms are swung forward and upward, as in par. 885.

Feet Together and Arms Forw. and Downw.—Swing!

The feet are brought together and the arms lowered forward and downward.

Note.—All Lungings are carried out left and right and then by numbers.

911. Standing: Lunging Outward with Arm Swinging Sideways.

Left (R.) Foot Outw. Lunging and Arms Sidew.—Swing!

FIG. 529. Horizontal Half-Standing

The named foot is carried outward, as in par. 843, at the same time the arms are swung sideways, as in par. 886.

Feet Together and Arms Downw.—Swing!

The feet are brought together and the arms lowered to the sides.

Note.—Lunging Outward can also be carried out with Arm Swinging Forward and Upward or Sideways and Upward.

Exercises of the Arms Out from a Combined Starting Position of the Arms and Legs.

The Starting Position. The Exercise

912. Forward Bend, Forward Walk St.: Arm Striking Sideways.

Starting Position is taken on the command:

Left (R.) Foot Forw. and Arms Forw.—Bend!

The named foot is placed forward, as in par. 844, at the same time the arms are bent forward, as in par. 838.

The exercise is carried out, as in par. 835, on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend!

Then feet changing is executed and the exercise repeated to the other side on the command:

Feet Change—Place!

The advanced foot is carried back to the first position and the other foot is placed forward to the Walk Position.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—When Arm Striking or Stretching is carried out in the Lunge, Walk or Stride Positions, Feet Changing is always executed.

913. Bend, Outward Lunge St.: Arm Stretching Upward, Forward and Sideways.

Starting Position is taken on the command:

Left (R.) Foot Outw. Lunging and Arms—Bend!

The named foot is carried outward, as in par. 843, and at the same time the arms are carried up to the Bend Position, as in par. 837.

The exercise is carried out on the commands:

Arms Upw.—Stretch! (Par. 876.) *Arms*—Bend!

Arms Forw.—Stretch! (Par. 877.) *Arms*—Bend!

Arms Sidew.—Stretch! (Par. 879.) *Arms*—Bend!

Then the exercise is carried out by numbers in six counts, feet changing executed, and the arm stretching repeated on the other side.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Upward, Forward and Sideways can also be carried out in the Forward Lunge Position.

914. Stretch, Forward Walk St. . . . . Arm Parting.

Starting Position is taken on the command:

Left (R.) Foot Forw. and Arms Forw. and Upw.—Raise!

The named foot is placed forward, as in par. 844, and at the same time the arms are raised forward and upward, as in par. 885.

The exercise is carried out by numbers, as in par. 835.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Parting can also be carried out in the Stretch, Outward Walk Standing Position.

915. Stretch, Forward Walk St.: Arm Swinging Forward and Upward.

Starting Position is taken as in preceding paragraph.

The exercise is carried out on the commands:

Arms Forw.—Swing! (Par. 836.) *Arms Upw.*—Swing!

Standing Position is returned to as in the preceding paragraph on the command:

Feet Together and Arms Forw. and Downw.—Sink.

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Outward Walk Standing Position.

916. Stretch, Forward Walk St.: Arm Swinging Forward and Downward.

Starting Position is taken as in par. 914.

The exercise is carried out on the commands:

Arms Forw. and Downw.—Swing!

The arms fully stretched are swung forward and downward in front of the body to the sides, taking care that the arms do not pass the thighs.

Arms Forw. and Upw.—Swing!

The arms are swung forward and upward to the Stretch Position.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

917. Stretch, Forward Lunge St. . . . . Arm Parting.

Starting Position is taken on the command:

Left (R.) Foot Forw. Lunging and Arms Forw. and Upw.—Raise!

The foot is carried forward, as in par. 846, at the same time the arms are raised forward and upward, as in par. 885.

The Arm Parting is carried out by numbers, as in par. 889.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Parting can also be carried out in the Stretch, Outward Lunge Standing Position.

918. Yard, Forward Lunge St.: Arm Swinging Forward and Sideways.

Starting Position is taken on the command:

Left (R.) Foot Forw. Lunging and Arms Sidew. —Raise!

The named foot is carried forward, as in par. 846, at the same time the arms are raised sideways, as in par. 835.

The exercise is carried out on the commands:

Arms Forw.—Swing!

The arms fully stretched are swung forward to the Reach Position.

Arms Sidew.—Swing!

The arms are swung sideways to the Yard Position.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

Note.—The exercise can also be carried out in the Yard, Outward Lunge Standing Position.

919. Yard, Forward Lunge St.....Hand Turning Upward.

Starting Position is taken as in preceding paragraph.

The exercise is carried out, as in par. 835, on the commands:

Hands Upw.—Turn! *Hands Downw.*—Turn!

Standing Position is returned to as in preceding paragraph.

Note.—Hand Turning Upward can also be carried out in the Yard, Outward Lunge Standing Position.

920. Bend, Toe Standing.....Arm Stretching Upward.

Starting Position is taken on the command:

Heel Raising and Arms—Bend!

The heels are raised, as in par. 848, at the same time the arms are carried up to the Bend Position, as in par. 837.

The exercise is carried out on the commands:

Arms Upw.—Stretch! *Arms*—Bend! (See par. 839.)

Standing Position is returned to on the command:

Heel Sinking and Arms Downw.—Stretch!

Note.—Arm Stretching Forward, Sideways or Backward can also be carried out in the Bend, Toe Standing Position.

921. Stretch, Toe Standing.....Arm Parting.

Starting Position is taken on the command:

Heel Raising and Arms Forw. and Upw.—Raise!

The heels are raised, as in par. 848, at the same time the arms are raised forward and upward, as in par. 885.

The exercise is carried out by numbers, as in par. 889.

Standing Position is returned to on the command:

Heel Sinking and Arms Forw. and Downw.—Sink!

Note.—Arm Swinging Forward and Upward or Arm Swinging Forward and Downward can also be carried out in the Stretch, Toe Standing Position.

922. Stretch, Outward Walk, Toe St.....Arm Parting.

Starting Position is taken on the commands:

Left (R.) Foot Outward—Place! (See par. 843.)

Heel Raising and Arms Forw. and Upw.—Raise!

The heels are raised, as in par. 848, and at the same time the arms are raised forward and upward, as in par. 885.

The Arm Parting is carried out by numbers, as in par. 889.

Standing Position is returned to on the commands:

Heels—Sink!

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Parting can also be carried out in the Stretch, Forward Walk Standing Position.

923. Bend, Outward Walk, Toe St.: Arm Stretching Sideways and Upward.

Starting Position is taken on the commands:

Left (R.) Foot Outw.—Place! (See par. 843.)

Heel Raising and Arms—Bend!

The heels are raised as in par. 848, and the arms carried up to the Bend Position, as in par. 843.

The exercise is carried out on the commands:

Arms Sidew.—Stretch! (See par. 875.) *Arms*—Bend!

Arms Upw.—Stretch! (See par. 876.) *Arms*—Bend!

Standing Position is returned to on the commands:

Heels—Sink!

Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching can also be carried out in the Bend, Forward Walk, Toe Standing Position.

924. Stretch, Outward Lunge, Toe St. . . . . Arm Parting.

Starting Position is taken on the commands:

Left (R.) Foot Outw. Lunging and Arms—Bend!

The named foot is carried outward, as in par. 845, and the arms are carried up to the Bend Position, as in par. 837.

Forw. Heel Raising and Arms Upw.—Stretch!

The forward heel is raised as high as possible and the arms are stretched upward. (See par. 876.)

The Arm Parting is then carried out by numbers, as in par. 889.

Standing Position is returned to on the commands:

Heel Sinking and Arms—Bend! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Parting can also be carried out in the Stretch, Forward Lunge Standing Position.

925. Yard, Outward Walk, Toe St.: Arm Swinging Forward and Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outw. and Arms—Bend! (See pars. 843-837.)

Heel Raising and Arms Sidew.—Stretch! (See pars. 848-875.)

The exercise is carried out on the commands:

Arms Forw.—Swing! *Arms Sidew.*—Swing!

Standing Position is returned to on the commands:

Heel Sinking and Arms—Bend! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Swinging can also be carried out in the Yard, Forward Walk, or in the Yard, Forward Lunge Standing Positions.

926. Bend, Stride, Toe St.: Arm Stretching Upward and Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Sidew.—Place!

Heel Raising and Arms—Bend! (See pars. 848-837.)

The exercise is carried out as in pars. 876-875 on the commands:

Arms Upw.—Stretch! *Arms*—Bend!

Arms Sidew.—Stretch! *Arms*—Bend!

Standing Position is returned to on the commands:

Heels—Sink! *Feet Together and Arms Downw.*—Stretch!

927. Forward Bend, Outward Walk, Toe St.: Arm Striking Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outw.—Place!

Heel Raising and Arms Forw.—Bend! (See pars. 848-838.)

The exercise is carried out as in par. 879 on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend!

Standing Position is returned to on the commands:

Heels—Sink! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Forward Walk, Toe Standing Position.

928. Forward Bend, Spring St. . . . . Arm Striking Sideways.

Starting Position is taken on the commands:

Heels—Raise!

Knee Bending and Arms Forw.—Bend! (See pars. 849-838.)

The exercise is carried out as in preceding paragraph.

Standing Position is returned to on the commands:

Knees—Stretch! *Heel Sinking and Arms Downw.*—Stretch!

Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Spring Sitting Position.

929. Bend, Spring Sitting: Arm Stretching Sideways and Forward.
Starting Position is taken on the commands:
Heels—Raise!
Knees to Sitting and Arms—Bend! (See pars. 850-837.)
The exercise is carried out as in pars. 875-877 on the commands:
Arms Sidew.—Stretch! *Arms*—Bend!
Arms Forw.—Stretch! *Arms*—Bend!
Standing Position is returned to on the commands:
Knees—Stretch! *Heel Sinking and Arms Downw.*—Stretch!

Note.—Arm Stretchings can also be carried out in the Bend, Spring Standing Position.

930. Stretch, Spring Sitting.....Arm Parting.
Starting Position is taken on the commands:
Heel Raising and Arms—Bend! (See pars. 848-837.)
Knees to Sitting and Arms Upw.—Stretch! (See pars. 850-876.)
The exercise is carried out by numbers, as in par. 889.
Standing Position is returned to on the commands:
Knee Stretching and Arms—Bend!
Heel Sinking and Arms Downw.—Stretch!

Note.—Arm Parting can also be carried out in the Stretch, Spring Standing Position.

931. Stretch, Spring Sitting: Arm Swinging Forward and Upward.
Starting Position is taken as in preceding paragraph.
The exercise is carried out as in par. 836-839 on the commands:
Arms Forw.—Swing! *Arms Upw.*—Swing!
Standing Position is returned to on the commands:
Knee Stretching and Arms—Bend!
Heel Sinking and Arms Downw.—Stretch!

Note.—The exercise can also be carried out in the Stretch, Spring Standing Position.

932. Stride, Spring St.: Arm Swinging Sideways (Sideways and Upward).
Starting position is taken on the commands:
Left (R.) Foot Sidew.—Place!
Heels—Raise! (See par. 848.) *Knees*—Bend! (See par. 849.)
The exercise is carried out on the commands:
Arms Sidew. (*Sidew. and Upw.*)—Swing! (See pars. 835-886.)
Arms Down. (*Sidew. and Downw.*)—Swing!

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink! *Feet Together*—Place!

Note.—Arm Swingings can also be carried out in the Stride, Spring Sitting Position.

933. Forward Bend, Spring St.....Arm Striking Sideways.
Starting position is taken on the commands:
Heels—Raise!
Knee Bending and Arms Forward—Bend! (See pars. 849-838.)
The exercise is carried out on the commands:
Arms Sidew.—Strike! (Par. 879.) *Arms Forw.*—Bend!
Standing Position is returned to on the commands:
Knees—Stretch! *Heel Sinking and Arms Downward*—Stretch!

Note.—Arm Striking can also be carried out in the Forward Bend, Spring Sitting Position.

934. Yard, Spring Sitting.....Hand Turning Upward.
Starting Position is taken on the commands:
Heels Raising and Arms—Bend! (See pars. 848-837.)
Knees to Sitting and Arms Sidew.—Stretch! (See pars. 850-875.)
The exercise is carried out on the commands:
Hands Upw.—Turn! (See par. 890.)
Hands Downw.—Turn!
Standing Position is returned to on the commands:
Knee Stretching and Arms—Bend!
Heel Sinking and Arms Downw.—Stretch!

Note.—Hand Turning can also be carried out in the Yard, Spring Standing Position.

Exercise of the Arms Carried Out in a Fixed Starting Position of the Trunk.

The Starting Position. The Exercise.

935. Bend (Forward Bend) Arch St.: Arm Stretching (Striking) Sideways.
Starting Position is taken on the commands:
Arms—Bend! (See par. 837.) (*Arms Forward*—Bend!) See par. 838.
Trunk Backward—Bend! (See par. 852.)
The exercise is carried out on the commands:
Arms Sidew.—Stretch! (See par. 875.) (*Arms Sidew.*—Strike!) (See par. 879.)
Arms—Bend! (*Arms Forw.*—Bend!)

Standing Position is returned to on the commands:
Trunk Upw.—Stretch *Arms Downw.*—Stretch!

Note.—Arm Striking can also be carried out in the Forward, Bend Arch Standing Position. Trunk bending forward should always follow exercises carried out in the Arch Standing Position.

936. Bend, Arch, Stride St.: Arm Stretching Upward and Sideways.
Starting Position is taken on the commands:
Left (R.) Foot Sidew. and Arms—Bend! (See pars. 847-837.)
Trunk Backw.—Bend! (See par. 852.)
The exercise is carried out on the commands:
Arms Upw.—Stretch! *Arms*—Bend! (See par. 839.)
Arms Sidew.—Stretch! *Arms*—Bend! (See par. 835.)
Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Forward or Backward can also be carried out in the Bend, Arch, Stride Standing Position.

937. Stretch, Arch, Stride St.....Arm Parting.
Starting Position is taken on the commands:
Feet Sidew. and Arms Upw.—Stretch! (See pars. 847-876.)
Trunk Backw.—Bend!
The exercise is carried out by numbers as in Par. 889.
Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Downw.—Stretch!

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Arch, Stride Standing Position.

938. Bend, Stoop St.....Arm Stretching Upward.
Starting Position is taken on the commands:
Arms—Bend! *Trunk Forw.*—Bend! (See par. 837-851.)
The exercise is carried out on the commands:
Arms Upw.—Stretch! *Arms*—Bend! (See par. 839.)
Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch!

Note.—Arm Stretching Forward, Sideways or Backward can also be carried out in the Bend, Stoop Standing Position.

939. Stretch, Stoop, Stride St.....Arm Parting.
Starting Position is taken on the commands:
Feet Sidew. and Arms Upw.—Stretch! (See pars. 847-876.)

Trunk Forw.—Bend! (See par. 851.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Parting can also be carried out in the Yard (A), Stoop, Stride Standing Position.

940. Forward Bend, Stoop, Stride St.: Arm Striking Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Sidew. and Arms Forw.—Bend! (See pars. 847-838.)

Trunk Forw.—Bend! (See par. 851.)

The exercise is carried out as in par. 879, on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend!

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

941. Bend, Stoop, Outward Walk St.: Arm Stretching Upward.

Starting Position is taken on the commands:

Left (R.) Foot Outw. and Arms—Bend! (See pars. 843-837.)

Trunk Forw.—Bend! (See par. 851.)

The exercise is carried out on the commands:

Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Stretching Sideways, Forward or Backward can also be carried out in the Bend, Stoop, Outward Walk Standing Position.

942. Forward Bend, Stoop, Outward Lunge St.: Arm Striking Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outw. Lunging and Arms Forward—Bend! (See pars. 845-838.)

Trunk Forw.—Bend!

The exercise is carried out on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Striking can also be carried out in the Forward Bend, Stoop, Forward Lunge Standing Position.

943. Bend, Arch, Outward Walk St.: Arm Stretching Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outward and Arms—Bend! (See pars. 843-837.)

Trunk Backw.—Bend! (See par. 852.)

The exercise is carried out on the commands:

Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Stretching Upward, Forward or Backward can also be carried out in the Bend, Arch, Outward Walk Standing Position.

944. Stretch, Arch, Forward Walk St.....Arm Parting.

Starting Position is taken on the commands:

Left (R.) Foot Forw. and Arms Forw. and Upw.—Raise! (See pars. 844-885.)

Trunk Backw.—Bend! (See par. 852.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Feet Together and Arms Forw. and Downw.*—Sink!

Note.—Arm Parting can also be carried out in the Yard (A), Arch, Forward Walk Standing Position.

945. Bend, Twist Standing.....Arm Stretching Sideways.

Starting Position is taken on the commands:

Arms—Bend! *Trunk to the Left (R.)*—Twist! (See par. 853.)

The exercise is carried out on the commands:

Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)

Standing Position is returned to on the commands:

Trunk Forw.—Twist! *Arms Downw.*—Stretch!

Note.—Arm Stretching Forward, Backward or Upward can also be carried out in the Bend, Twist Standing Position.

946. Bend, Twist, Stride St.....Arm Stretching Upward.

Starting Position is taken on the commands:

Left (R.) Foot Sidew. and Arms—Bend! (See pars. 847-837.)

Trunk to the Left (R.)—Twist! (See par. 853.)

The exercise is carried out on the commands:

Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)

Standing Position is returned to on the commands:

Trunk Forw.—Twist! *Feet Together and Arms Downw.*—Stretch!

Note—Arm Stretching Forward, Backward or Sideways can also be carried out in the Bend, Twist, Stride Standing Position.

947. Stretch, Twist Standing.....Arm Parting.
Starting Position is taken on the commands:
Arms Upw.—Stretch! (See par. 876.)
Trunk to the Left (*R.*)—Twist! (See par. 853.)
The exercise is carried out by numbers as in par. 889.
Standing position is returned to on the commands:
Trunk Forw.—Twist! *Arms Downw.*—Stretch!

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Twist Standing Position.

948. Stretch, Twist, Stride St.....Arm Parting.
Starting Position is taken on the commands:
Feet Sidew. and Arms Upw.—Stretch! (See pars. 847-876.)
Trunk to the Left (*R.*)—Twist! (See par. 853.)
The exercise is carried out by numbers as in par. 889.
Standing Position is returned to on the commands:
Trunk Forw.—Twist! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Twist, Stride Standing Position.

949. Bend, Twist, Outward Walk St.: Arm Stretching Sideways.
Starting Position is taken on the commands:
Left (*R.*) *Foot Outw. and Arms*—Bend! (See pars. 843-837.)
Trunk to the Left (*R.*)—Twist! (See par. 853.)
The exercise is carried out on the commands:
Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)
Standing Position is returned to on the commands:
Trunk Forw.—Twist! *Feet Together and Arms Downw.*—Stretch!

Note 1.—In the Walk and Lunge Positions Trunk Twisting is always carried out to the side of the advanced foot.

Note 2.—Arm Stretching Upward, Backward or Forward can also be carried out in the Bend, Twist, Outward Walk Standing Position.

950. Forward Bend, Twist Standing.....Arm Striking Sideways.
Starting Position is taken on the commands:
Arms Forw.—Bend! (See par. 838.) *Trunk to the Left* (*R.*)—Twist!
The exercise is carried out on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)
Standing Position is returned to on the commands:
Trunk Forw.—Twist! *Arms Downw.*—Stretch!

Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Twist, Walk and Lunge Standing Positions.

951. Stretch, Twist, Outward Walk St. . . . . Arm Parting.

Starting Position is taken on the commands:

Left (*R.*) *Foot Outw. and Arms Forw. and Upw.*—Raise! (See pars. 843-885.)

Trunk to the Left (*R.*)—Twist!

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the commands:

Trunk Forward—Twist!

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Parting can also be carried out in the Stretch, Twist, Outward Lunge Standing Position.

952. Stretch, Twist, Outward Lunge St.: Arm Swinging Forward and Upward.

Starting Position is taken on the commands:

Left (*R.*) *Foot Outw. Lunging and Arms Forw. and Upw.*—Raise! (See pars. 845-885.)

Trunk to the Left (*R.*)—Twist!

The exercise is carried out on the commands:

Arms Forw.—Swing! *Arms Upw.*—Swing! (See par. 836.)

Standing Position is returned to on the commands:

Trunk Forw.—Twist!

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Twist, Outward (Forward) Walk Standing Position.

953. Bend, Sidebend Standing . . . . . Arm Stretching Sideways.

Starting Position is taken on the commands:

Arms—Bend! (See par. 837.) *Trunk to the Left* (*R.*)—Bend! (See par. 854.)

The exercise is carried out on the commands:

Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Arms Downw.*—Stretch!

Note.—Arm Stretching Upward, Backward or Forward can also be carried out in the Bend, Sidebend Standing Position.

954. Bend, Sidebend, Stride St. . . . . Arm Stretching Upward.

Starting Position is taken on the commands:

Left (*R.*) *Foot Sidew. and Arms*—Bend! (See pars. 847-837.)

Trunk to the Left (*R.*)—Bend! (See par. 854.)

The exercise is carried out on the commands:

Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Stretching Forward or Sideways can also be carried out in the Bend, Sidebend, Stride Standing Position.

955. Stretch, Sidebend, Stride St.....Arm Parting.
Starting Position is taken on the commands:
Feet Sidew. and Arms Upw.—Stretch! (See pars. 847-876.)
Trunk to the Left (*R.*)—Bend!
The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Sidebend, Stride Standing Position.

956. Yard, Sidebend Standing.....Hand Turning Upward.
Starting Position is taken on the commands:
Arms Sidew.—Raise! *Trunk to the Left* (*R.*)—Bend!

The exercise is carried out on the commands:
Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.)

Standing Position is returned to on the commands:
Trunk Upward—Stretch! *Arms Downward*—Sink!

957. Yard, Sidebend, Stride St.....Hand Turning Upward.
Starting Position is taken on the commands:
Left (*R.*) *Foot Sidew. and Arms Sidew.*—Raise! (See pars. 847-835.)
Trunk to the Left (*R.*)—Bend!
The exercise is carried out as in the preceding paragraph.

Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Downw.—Sink!

958. Forward Bend, Sidebend St.....Arm Striking Sideways.
Starting Position is taken on the commands:
Arms Forw.—Bend! (See par. 838.) *Trunk to the Left* (*R.*)—Bend!

The exercise is carried out as in par. 879, on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch!

Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Sidebend, Stride Standing Position.

959. Bend, Sidebend, Forward Walk St.: Arm Stretching Upward.
Starting Position is taken on the commands:
Left (*R.*) *Foot Forw. and Arms*—Bend! (See pars. 844-837.)
Trunk to the Left (*R.*)—Bend!
The exercise is carried out on the commands:
Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)
Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Downw.—Stretch!
Note.—Arm Stretching Forward or Sideways can also be carried out in the Bend, Sidebend, Forward Walk Standing Position.

960. Stretch, Sidebend, Forward Walk St.....Arm Parting.
Starting Position is taken on the commands:
Left (*R.*) *Foot Forw. and Arms Forw. and Upw.*—Raise! (See pars. 844-885.)
Trunk to the Left (*R.*)—Bend!
The exercise is carried out by numbers as in par. 889.
Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Forw. and Downw.—Sink!
Note.—Arm Parting can also be carried out in the Stretch, Sidebend, Forward Lunge Standing Position.

961. Forward Bend, Sidebend, Forward Walk St.: Arm Striking Sideways.
Starting Position is taken on the commands:
Left (*R.*) *Foot Forw. and Arms Forw.*—Bend! (See pars. 844-838.)
Trunk to the Left (*R.*)—Bend! (See par. 854.)
The exercise is carried out as in par. 879, on the commands:
Arms Sidew.—Strike! *Arms Forward*—Bend!
Standing Position is returned to on the commands:
Trunk Upw.—Stretch!
Feet Together and Arms Downw.—Stretch!
Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Sidebend, Forward Lunge Standing Position.

962. Stretch, Sidebend, Forward Lunge St.....Arm Parting.
Starting Position is taken on the commands:
Left (*R.*) *Foot Forw. Lunging and Arms Forw. and Upw.*—Raise! (See pars. 846-885.)
Trunk to the Left (*R.*)—Bend!
The exercise is carried out by numbers as in par. 889.

Standing position is returned to on the commands:

Trunk Upw.—Stretch!

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Parting can also be carried out in the Yard (A), Sidebend, Forward Lunge Standing Position.

963. Bend, Sidebend, Outward Lunge St.: Arm Stretching Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outw. Lunging and Arms—Bend! (See pars. 845-837.)

Trunk to the Left (R.)—Bend!

The exercise is carried out as in par. 875, on the commands:

Arms Sidew.—Stretch! *Arms*—Bend!

Standing Position is returned to on the commands:

Trunk Upw.—Stretch!

Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Upward or Forward can also be carried out in the Bend, Sidebend, Outward Lunge, Standing Position.

Combined Exercises of the Arms and Legs Carried Out in the Standing and Combined Starting Positions.

The Starting Position. The Exercise.

964. Standing: Foot Placing Forward with Arm Raising Sideways (Forward).

The exercise is carried out on the commands:

Left (R.) Foot Forw. and Arms Sidew. (Forw.)—Raise! (See pars. 844-835.)

Feet Together and Arms Downw.—Sink!

Note.—Arm Raisings can also be executed with Foot Placing Outward.

965. Standing: Lunging Forward with Arm Raising Forward and Upward.

The exercise is carried out on the commands:

Left (R.) Foot Forw. Lunging and Arms Forw. and Upw.—Raise! (See pars. 846-885.)

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Raising Sideways and Upward can also be carried out in the above position.

966. Standing: Foot Placing Sideways with Arm Raising Forward (Sideways).

The exercise is carried out on the commands:

Left (R.) Foot Sidew. and Arms Forw. (Sidew.)—Raise! (See pars. 847-836-835.)

Feet Together and Arms Downw.—Sink!

Note.—The Arm Raisings can also be executed with Feet Placing Sideways with a Jump, as in par. 847.

967. Standing: Feet Placing Sideways with Arm Stretching Sideways.

The exercise is carried out on the commands:

Feet Sidew. and Arms Sidew.—Stretch!

(Two motions:)

1. The left foot is placed sideways as in par. 847, at the same time the arms are carried up to the Bend Position, as in par. 837.

2. The right foot is placed sideways and the arms stretched sideways.

Feet Together and Arms Downw.—Stretch! (Two motions.)

Note.—Arm Stretching Forward or Upward can also be carried out with Feet Placing Sideways. (Two motions.)

968. Standing: Feet Placing Sideways with a Jump with Neck Rest.

The exercise is carried out on the commands:

Feet Sidew. with a Jump and Neck—Rest! (See pars. 847-840.)

Feet Together with a Jump and Arms Downw.—Stretch!

Note.—Hips Firm, Arm Bending, Arm Bending Forward, or Arm Swingings can also be executed with Feet Placing Sideways with a Jump.

969. Standing: Heel Raising with Arm Raising Forward and Upward.

The exercise is carried out on the commands:.

Heel Raising and Arms Forw. and Upw.—Raise! (See pars. 848-885.)

Heel Sinking and Arms Forw. and Downw.—Sink!

Note.—Heel Raising can also be carried out with Arm Raising Sideways and Upward or Arm Circling.

970. Standing: Heel Raising and Knee Bending, with Arm Stretching Upward and Downward (Sideways and Downward).

The exercise is carried out on the commands:

Heel Raising and Arms—Bend! (See pars. 848-837.)

Knee Bending and Arms Upw. (*Sidew.*)—Stretch! (See pars. 849-876, 850.)

Knee Stretching and Arms—Bend!

Heel Sinking and Arms Downw.—Stretch!

Note.—The Arm Stretchings above can also be carried out with Knee Bending to Sitting, as in par. 850.

971. Stretch, Stride St.: Heel Raising with Arm Parting.

Starting Position is taken on the command:

Feet Sidew. and Arms Upw.—Stretch! (Two motions.)

The exercise is carried out by numbers on the commands:
Heel Raising with Arm Parting by Numbers—One! Two!

At count One, the heels are raised as in par. 848, at the same time the arms are lowered sideways as in par. 833.

At count Two, the heels are lowered and the arms raised upward to the Stretch Position, and so on.

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch! (Two motions.)

972. Reach, Stride St.: Heel Raising with Arm Swinging Sideways.

Starting Position is taken on the command:
Left (R.) Foot Sidew. and Arms Forw.—Raise! (See pars. 847-836.)

The exercise is carried out on the commands:
Heel Raising and Arms Sidew.—Swing! (See pars. 848-835.)
Heel Sinking and Arms Forw.—Swing!

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Sink!

Note.—Arm Swinging Upward and Forward can also be carried out in the Reach, Stride Standing Position.

973. Bend, Stride, Toe St.: Knee Bending with Arm Stretching Upward.

Starting Position is taken on the commands:
Left (R.) Foot Sidew.—Place!
Heel Raising and Arms—Bend! (Pars. 848-837.)

The exercise is carried out on the commands:
Knee Bending and Arms Upw.—Stretch! (See pars. 849-876.)
Knee Stretching and Arms—Bend!

Standing Position is returned to on the commands:
Heels—Sink! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Stretching, Sideways, Forward or Backward with knee bending can also be carried out in the above Starting Position.

974. Bend, Outward Walk St.: Heel Raising with Arm Stretching Sideways.

Starting Position is taken on the command:
Left (R.) Foot Outw. and Arms—Bend! (See pars. 843-837.)

The exercise is carried out on the commands:
Heel Raising and Arms Sidew.—Stretch! (See pars. 848-875.)
Heel Sinking and Arms—Bend!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Heel Raising with arm Stretching Backward, Upward or Forward can also be carried out in the above Starting Position.

975. Stretch, Outward Walk St.: Heel Raising with Arm Parting.

Starting Position is taken on the command:

Left (R.) Foot Outw. and Arms Forw. and Upw.—Raise! (See pars. 843-885.)

The exercise is carried out by numbers as in pars. 848-889.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Swinging Forward and Upward, with heel raising, can also be carried out in the above Starting Position.

976. Yard, Forward Walk St.: Heel Raising with Hand Turning Upward.

Starting Position is taken on the command:

Left (R.) Foot Forw. and Arms Sidew.—Raise! (See pars. 844-835.)

The exercise is carried out on the commands:

Heel Raising and Hands Upw.—Turn! (See pars. 848-890.)

Heel Sinking and Hands Downw.—Turn!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

Note.—The above exercise can also be carried out in the Yard Outward Walk Standing Position.

977. Forward Bend, Outward Walk St.: Heel Raising with Arm Striking Sideways.

Starting Position is taken on the command:

Left (R.) Foot Outw. and Arms Forw.—Bend! (See pars. 843-838.)

The exercise is carried out on the commands:

Heel Raising and Arms Sidew.—Strike! (See pars. 848-879.)

Heel Sinking and Arms Forw.—Bend!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—The above exercise can also be carried out in the Forward Bend, Forward Walk Standing Position.

978. Reach, Outward Walk St.: Heel Raising with Arm Swinging Sideways.

Starting Position is taken on the command:

Left (R.) Foot Outw. and Arms Forw.—Raise! (See pars. 843-836.)

The exercise is carried out on the commands:
Heel Raising and Arms Sidew.—Swing! (See pars. 848-883.)
Heel Sinking and Arms Forw.—Swing!

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Sink!

Note.—Arm Swinging Upward and Forward can also be carried out in the above Starting Position.

979. Bend, Outward Walk, Toe St.: Knee Bending with Arm Stretching Sideways.

Starting Position is taken on the commands:
Left (R.) Foot Outw.—Place!
Heel Raising and Arms—Bend! (See pars. 848-837.)

The exercise is carried out on the commands:
Knee Bending and Arms Sidew.—Stretch! (See pars. 849-875.)
Knee Stretching and Arms—Bend!

Standing Position is returned to on the commands:
Heels—Sink! *Feet Together and Arms Downw.*—Stretch!

Note.—Knee Bending with Arm Stretching Upward, Forward or Backward, can also be carried out in the above Starting Position.

980. Stretch, Outward Walk, Toe St.: Knee Bending with Arm Parting.

Starting Position is taken on the commands:
Left (R.) Foot Outw. and Arms—Bend! (See pars. 843-837.)
Heel Raising and Arms Upw.—Stretch!

The exercise is carried out on the commands:
Knee Bending with Arm Parting by Numbers—One! Two!

At count One, the knees are bent as in par. 849, at the same time the arms are lowered sideways as in par. 889.

At count Two, the knees are stretched and the arms raised upward to the Stretch Position, and so on.

Standing Position is returned to on the commands:
Heel Sinking and Arms—Bend! *Feet Together and Arms Downw.*—Stretch.

Note.—Arm Swinging Forward and Upward can also be carried out in the Stretch, Outward Walk Standing Position.

981. Yard, Forward Walk, Toe St.—Knee Bending with Hand Turning Upward.

Starting Position is taken on the commands:
Left (R.) Foot Forw. and Arms—Bend! (See pars. 844-837.)

Heel Raising and Arms Sidew.—Stretch! (See pars. 848-875.)

The exercise is carried out on the commands:

Knee Bending and Hands Upw.—Turn! (See pars. 849-890.)

Knee Stretching and Hands Downw.—Turn!

Standing Position is returned to on the commands:

Heel Sinking and Arms—Bend! *Feet Together and Arms Downw.*—Stretch!

Note.—Knee Bending with Hand Turning Upward can also be carried out in the Yard, Outward Walk Standing Position.

982. Forward Bend, Outward Walk, Toe St.: Knee Bending with Arm Striking Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Outw.—Place!

Heel Raising and Arms Forw.—Bend! (See pars. 848-838.)

The exercise is carried out on the commands:

Knee Bending and Arms Sidew.—Strike! (See pars. 849-879.)

Knee Stretching and Arms Forw.—Bend!

Standing Position is returned to on the commands:

Heels—Sink! *Feet Together and Arms Downw.*—Stretch!

Note.—The above exercise can also be carried out in the Forward Bend, Forward Walk, Toe Standing Position.

983. Bend, Outward Lunge St.: Forward Heel Raising with Arm Stretching Forward.

Starting Position is taken on the command:

Left (R.) Foot Outward Lunging and Arms—Bend! (See pars. 845-837.)

The exercise is carried out on the commands:

Forw. Heel Raising and Arms Upw.—Stretch! (See pars. 848-876.)

Heel Sinking and Arms—Bend!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Backward, Forward or Sideways can also be carried out in the Bend, Outward Lunge Standing Positon.

984. Stretch, Forward Lunge St.: Forward Heel Raising with Arm Parting.

Starting Position is taken on the command:

Left (R.) Foot Forw. Lunging and Arms Forw. and Upward—Raise!

The exercise is carried out on the commands:

Forw. Heel Raising with Arm Parting by Numbers—One! Two!

At count One, the forward heel is raised as in par. 848, at the same time the arms are lowered as in par. 889.

At count Two, the heel is lowered and the arms raised upward to the Stretch Position, and so on.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

Note.—The above exercise can also be carried out in the Stretch, Outward Lunge Standing Position.

985. Yard, Outward Lunge St.: Forward Heel Raising with Hand Turning Upward.

Starting Position is taken on the command:

Left (R.) Foot Outw. Lunging and Arms Sidew.—Raise! (See pars. 845-835.)

The exercise is carried out on the commands:

Forw. Heel Raising and Hands Upw.—Turn! (See pars. 848-890.)

Heel Sinking and Hands Downw.—Turn!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink

Note.—The above exercise can also be carried out in the Yard, Forward Lunge Standing Position.

986. Forward Bend, Forward Lunge, Toe St.: Arm Striking Sideways.

Starting Position is taken on the commands:

Left (R.) Foot Forward—Lunge! (See par. 846.)

Forw. Heel Raising and Arms Forw.—Bend! (See pars. 848-838.)

The exercise is carried out on the commands:

Arms Sidew—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the commands:

Hee's—Sink! *Feet Together and Arms Downw.*—Stretch!

Note.—Arm Striking Sideways can also be carried out in the Forward Bend, Outward Lunge, Toe Standing Position.

987. Bend, Spring St.: Arm Stretching Sideways (Upward), (Forward).

Starting Position is taken on the commands:

Heels—Raise! *Knee Bending and Arms*—Bend! (See pars. 848-849-837.)

The exercise is carried out on the commands:

Arms Sideways (Upw.) (Forw.)—Stretch! *Arms*—Bend!

Standing Position is returned to on the commands:

Knees—Stretch! *Heel Sinking and Arms Downw.*—Stretch!

Note.—Arm Stretchings can also be carried out in the Bend, Spring Sitting Position.

988. Stretch, Spring St.....Arm Parting.

Starting Position is taken on the commands:

Heel Raising and Arms—Bend! (See pars. 848-837.)

Knee Bending and Arms Upw.—Stretch! (See pars. 849-876.)

The exercise is carried out by numbers as in par. 889.

Standing position is returned to on the commands:

Knee Stretching and Arms—Bend!

Heel Sinking and Arms Downw.—Stretch!

Note.—Arm Parting can also be carried out in the Stretch, Spring Sitting Position.

989. Stretch, Spring St.: Knee Stretching with Arm Parting.

Starting Position is taken as in preceding paragraph.

The exercise is carried out on the commands:

Knee Stretching with Arm Parting by Numbers—One! Two!

At count "One," the knees are stretched and the arms are parted.

At count "Two," the knees are bent and the arms raised upward, and so on.

Standing position is returned to on the commands:

Knee Stretching and Arms—Bend!

Heel Sinking and Arms Downw.—Stretch!

Note.—The exercise can also be carried out in the Stretch, Spring, Sitting Position.

990. Forward Bend Spring St.: Knee Stretching with Arm Striking Sideways.

Starting Position is taken on the commands:

Heels—Raise! *Knee Bending and Arms Forw.*—Bend!

The exercise is carried out on the commands:

Knee Stretching and Arms Sidew.—Strike! (See pars. 849-879.)

Knee Bending and Arms Forw.—Bend!

Standing Position is returned to on the commands:

Knees—Stretch! *Heel Sinking and Arms Downw.*—Stretch!

Note.—The exercise can also be carried out in the Forward Bend, Spring Sitting Position.

991. Yard Spring St.: Knee Stretching with Hand Turning Upward.

Starting Position is taken on the commands:

Heel Raising and Arms—Bend! *Knee Bending and Arms Sidew.*—Stretch!

The exercise is carried out on the commands:
Knee Stretching and Hands Upw.—Turn! (See pars. 849-890.)
Knee Bending and Hands Downw.—Turn!

Standing Position is returned to on the commands:
Knee Stretching and Arms—Bend!
Heel Sinking and Arms Downw.—Stretch!

Note.—The exercise can also be carried out in the Yard, Spring, Sitting Position.

992. Bend, Stride, Spring St.: Arm Stretching Sideways (Upward), (Forward).

Starting Position is taken on the commands:
Left (R.) Foot Sidew. and Arms—Bend! (See pars. 847-837.)
Heels—Raise! *Knees*—Bend!

The exercise is carried out on the commands:
Arms Sidew. (Upw.), (Forw.)—Stretch! *Arms*—Bend!

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!
Feet Together and Arms Downw.—Stretch!

993. Bend, Stride, Spring St.: Knee Stretching with Arm Stretching Sideways.

Starting position is taken as in preceding paragraph.
The exercise is carried out on the commands:

Knee Stretching and Arms Sidew.—Stretch! (See pars. 849-875.)
Knee Bending and Arms—Bend!

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!
Feet Together and Arms Downw.—Stretch!

Note.—Knee Stretching with Arm Stretching Upward, Backward or Forward can also be carried out in the above Starting Position.

994. Stretch, Stride, Spring St.: Knee Stretching with Arm Parting.

Starting Position is taken on the commands:
Feet Sidew. and Arms Upw.—Stretch! (Two Motions.)
Heels—Raise! *Knees*—Bend!

The exercise is carried out by numbers as in pars. 849-889.

Standing position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!
Feet Together and Arms Downw.—Stretch! (Two motions.)

995. Forward Bend, Stride, Spring St.: Knee Stretching with Arm Striking Sideways.

Starting Position is taken on the command:
Left (*R.*) *Foot Sidew. and Arm Forw.*—Bend! (See pars. 847-837.)
Heels—Raise! *Knees*—Bend!

The exercise is carried out as in pars. 849-889.

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!
Feet Together and Arms Downw.—Stretch!

996. Yard, Stride, Spring St.: Knee Stretching with Hand Turning Upward.

Starting Position is taken on the commands:
Feet Sidew. and Arms Sidew.—Stretch! (Two motions.)
Heels—Raise! *Knees*—Bend!

The exercise is carried out on the commands:
Knee Stretching and Hands Upw.—Turn! (See pars. 849-890.)
Knee Bending and Hands Downw.—Turn!

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!
Feet Together and Arms Downw.—Stretch! (Two motions.)

Exercise of the Trunk Carried Out from a Fixed Starting Position of the Legs and Arms

The Starting Position. The Exercise.
997. Yard Stride St. . . . . Trunk Bending Sideways.
Starting Position is taken on the command:
Left (*R.*) *Foot Sidew. and Arms Sidew.*—Raise! (See pars. 847-835.)

The exercise is carried out on the commands:
Trunk to the Left (*R.*)—Bend! *Trunk Upw.*—Stretch! (See par. 854.)

Standing Position is returned to on the commands:
Feet Together and Arms Downw.—Sink!

Note.—Trunk Bending Sideways can also be carried out in the Wing, Rest, Forward Bend, or Stretch, Stride Standing Positions.

998. Bend, Outward Walk, St. . . . . Trunk Bending Sideways.
Starting Position is taken on the command:
Left (*R.*) *Foot Outw. and Arms*—Bend! (See pars. 843-837.)

The exercise is carried out on the commands:
Trunk to the Left (*R.*)—Bend! *Trunk Upw.*—Stretch! (See par. 854.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note 1.—Trunk Bending Sideways in the Walk and Lunge Positions is always carried out to the side of the advance foot, then Feet Changing is executed and the exercise repeated to the other side. (See par. 843 for Feet Changing.)

Note 2.—Trunk Bending Sideways can also be carried out in the Yard, Rest, Stretch, or Forward Bend, Outward Walk, Standing Positions.

999. Rest, Outward (Forward) Lunge St.: Trunk Bending Sideways.

Starting Position is taken on the command:

Left (R.) Foot Outw. (Forw.) Lunging and Neck—Rest! (See pars. 845-846-840.)

The exercise is carried out as in preceding paragraph, taking care that the Side Bending is carried out to the side of the advanced foot.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Side Bending can also be carried out in the Stretch, Yard, Bend, or Forward Bend, Outward (Forward), Lunge Standing Positions.

1000. Rest, Stride St. . . . . Trunk Bending Backward.

Starting Position is taken on the command:

Left (R.) Foot Sidew. and Neck—Rest! (See pars. 847-840.)

The exercise is carried out as in par. 852 on the commands:

Trunk Backw.—Bend! *Trunk Upw.*—Stretch!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Trunk Bending Backward can also be carried out in the Yard, or Forward Bend, Stride Standing Positions.

1001. Yard, Outward (Forward) Walk St.: Trunk Bending Backward.

Starting Position is taken on the command:

Left (R.) Foot Outw. (Forw.) and Arms Sidew.—Raise! (See pars. 843-844-835.)

The exercise is carried out as in par. 852, on the commands:

Trunk Backw.—Bend! *Trunk Upw.*—Stretch!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

Note.—Trunk Bending Backward can also be carried out in the Rest, Bend, Forward Bend, or Stretch, Outward (Forward) Walk Standing Positions.

1002. Wing, Stride St. . . . . Trunk Bending Forward.
Starting Position is taken on the command:
Left (R.) Foot Sidew. and Hips—Firm! (See pars. 847-834.)
The exercise is carried out on the commands:
Trunk Forw.—Bend! *Trunk Upward*—Stretch! (See par. 851.)
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Bending Forward can also be carried out in the Bend, Rest, Stretch or Forward Bend, Stride Standing Positions.

1003. Bend, Outward (Forward) Walk St.: Trunk Bending Forward.
Starting Position is taken on the command:
Left (R.) Foot Outw. (Forw.) and Arms—Bend! (See pars. 843-844-837.)
The exercise is carried out as in par. 851, on the commands:
Trunk Forw.—Bend! *Trunk Upw.*—Stretch!
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Bending Forward can also be carried out in the Rest, Yard, Stretch, or Wing, Outward (Forward) Walk Standing Positions.

1004. Wing, Outward (Forward) Lunge St.: Trunk Bending Forward.
Starting Position is taken on the command:
Left (R.) Foot Outw. (Forw.) Lunging and Hips—Firm! (See pars. 845-846-834.)
The exercise is carried out on the commands:
Trunk Forw.—Bend! *Trunk Upw.*—Stretch! (See par. 851.)
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Bending Forward can also be carried out in the Rest, Stretch, Bend or Forward Bend, Outward (Forward) Lunge Standing Positions.

1005. Stretch, Stride St.: Trunk Bending Forward and Downward.
Starting Position is taken on the command:
Feet Sidew. and Arms Upw.—Stretch!
(Two motions:)
1. The left foot is placed sideways and the arms are carried up to the Bend Position.
2. The right foot is placed sideways and the arms are stretched upward to the Stretch Position.

The exercise is carried out as in par. 898 on the commands:
Trunk Forw. and Downw.—Bend!
Trunk Forw. and Upw.—Stretch!

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch! (Two motions.)

Note.—Trunk Bending Forward and Downward can also be carried out in the Bend, Wing, or Rest, Stride Standing Positions.

1006. Rest, Stride St. . . . . Trunk Twisting.
Starting Position is taken on the command:
Left (R.) Foot Sidew. and Neck—Rest! (See pars. 847-840.)

The exercise is carried out as in par. 853 on the commands:
Trunk to the Left (R.)—Twist! *Trunk Forw.*—Twist!

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Twisting can also be carried out in the Stretch, Yard, Bend, or Forward Bend, Stride Standing Position.

1007. Bend Outward (Forward) Walk St. . . . . Trunk Twisting.
Starting Position is taken on the command:
Left (R.) Foot Outw. (Forw.) and Arms—Bend! (See pars. 843-844-837.)

The exercise is carried out on the commands:
Trunk to the Left (R.)—Twist! *Trunk Forw.*—Twist!

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Twisting can also be carried out in the Rest, Stretch, Yard, or Forward Bend, Outward (Forward) Walk Standing Positions.

1008. Wing. Outward (Forward) Lunge St.: Trunk Twisting.
Starting Position is taken on the command:
Left (R.) Foot Outw. (Forw.) Lunging and Hips—Firm!
The exercise is carried out as in preceding paragraph.

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Trunk Twisting can also be carried out in the Rest, Stretch, Bend, or Forward Bend, Outward (Forward) Lunge Standing Positions.

Combined Balance Exercises Carried Out in the Standing Position.

The Starting Position. . . The Exercise.

1009. Standing: Knee Upbending with Arm Raising Sideways.

The exercise is carried out on the commands:

Left (R.) Knee Upbending and Arms Sidew.—Raise! (See pars. 901-835.)

Feet Together and Arms Downw.—Sink!

Note 1.—All Balance exercises are carried out slowly.

Note 2.—Knee Upbending can also be carried out with Arm Raising Forward, Forward and Upward or Sideways and Upward.

1010. Standing.....Knee Upbending with Hips Firm.

The exercise is carried out on the commands:

Left (R.) Knee Upbending and Hips—Firm! (See pars. 901-835.)

Feet Together and the Arms Downw.—Stretch!

Note.—Knee Upbending can also be carried out with Arms Bend, Arm Bending Forward or Neck Rest.

1011. Standing: Leg Raising Backward with Arm Raising Sideways.

The exercise is carried out on the commands:

Left (R.) Leg Backw. Raising and Arms Sidew.—Raise! (See pars. 902-835.)

Feet Together and Arms Downw.—Sink!

Note.—Leg Raising Backward can also be carried out with Arm Bending Forward, Neck Rest or Hips Firm.

1012. Standing: Leg Raising Backward with Arm Bending.

The exercise is carried out on the commands:

Left (R.) Leg Backw. Raising and Arms—Bend! (See pars. 902-837.)

Feet Together and Arms Downw.—Stretch!

Note.—Leg Raising Backward can also be carried out with arm raising Forward, Forward and Upward or Sideways and Upward.

1013. Standing: Leg Raising Sideways with Arm Raising Forward and Upward.

The exercise is carried out on the commands:

Left (R.) Leg Sidew. Raising and Arms Forw. and Upw.—Raise! (See pars. 904-885.)

Feet Together and Arms Forw. and Downw.—Sink!

Note.—Leg Raising Sideways can also be carried out with Arm Raising Sideways, Sideways and Upward or Forward.

1014. Standing: Leg Raising Sideways with Neck Rest.

The exercise is carried out on the commands:

Left (R.) Leg Sidew. Raising and Neck—Rest! (See pars. 904-840.)

Feet Together and Arms Downw.—Stretch!

Note.—Leg Raising Sideways can also be carried out with Hips Firm, Arms Bend or Arm Bending Forward.

1015. Standing: Leg Raising Forward with Arm Raising Sideways.
The exercise is carried out on the commands:
Left (*R.*) *Leg Forw. Raising and Arms Sidew.*—Raise! (See pars. 903-835.)
Feet Together and Arms Downw.—Sink!

Note.—Leg Raising Forward can also be carried out with Arm Raising Forward, Forward and Upward or Sideways and Upward.

1016. Standing: Leg Raising Forward with Arm Bending Forward.
The exercise is carried out on the commands:
Left (*R.*) *Leg Forw. Raising and Arms Forw.*—Bend! (See pars. 903-838.)
Feet Together and Arms Downw.—Stretch!

Note.—Leg Raising Forward can also be carried out with Neck Rest, Hips Firm or Arm Bending.

1017. Standing: Horizontal Toe Support with Arm Raising Sideways.
The exercise is carried out on the commands:
Left (*R.*) *Foot Hor. Toe Support and Arms Sidew.*—Raise! (See pars. 905-835.)
Feet Together and Arms Downw.—Sink!

Note.—The exercise can also be carried out with Arm Raising Forward, Forward and Upward or Sideways and Upward.

1018. Standing. . . . . Horizontal Toe Support with Hips Firm.
The exercise is carried out on the commands:
Left (*R.*) *Foot Hor. Toe Support and Hips*—Firm! (See pars. 905-834.)
Feet Together and Arms Downw.—Stretch!

Note.—The exercise can also be carried out with Neck Rest, Arm Bending or Arm Bending Forward.

1019. Standing: Horizontal Half-Standing with Arm Raising Sideways.
Left (*R.*) *Foot Hor. Half-Standing and Arms Sidew.*—Raise! (See pars. 906-835.)
Feet Together and Arms Downw.—Sink!

Note.—The exercise can also be carried out with Arm Raising Sideways and Upward or Forward and Upward.

1020. Standing: Horizontal Half-Standing with Hips Firm.
The exercise is carried out on the commands:
Left (*R.*) *Foot Hor. Half-Standing and Hips*—Firm! (See pars. 905-834.)
Feet Together and Arms Downw.—Stretch!

Note.—The exercise can also be carried out with Neck Rest, Arm Bending or Arm Bending Forward.

Arm Exercises Carried Out in the Balance Half-Standing Positions.

The Starting Position. The Exercise.

1021. Crook Half-St.....Arm Raising Sideways.

Starting Position is taken on the command:

Left (R.) Knee Upw.—Bend! (See par. 901.)

The exercise is carried out on the commands:

Arms Sidew.—Raise! *Arms Downw.*—Sink!

Standing Position is returned to on the command:

Feet Together—Place!

Note 1.—In all Half-Standing Positions, Feet Changing is executed and the exercise repeated to the other side.

Note 2.—Arm Raising Forward, Forward and Upward or Sideways and Upward, can also be carried out in the Crook Half-Standing Position.

1022. Bend, Crook Half-St.....Arm Stretching Sideways.

Starting Position is taken on the command:

Left (R.) Knee Upbending and Arms—Bend! (See pars. 901-837.)

The exercise is carried out on the commands:

Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Backward, Forward or Upward can also be carried out in the above Starting Position.

1023. Stretch, Crook Half-St.....Arm Parting.

Starting Position is taken on the command:

Left (R.) Knee Upbending and Arms Forw. and Upw.—Raise! (See pars. 901-885.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

1024. Forward Bend, Crook Half-St.: Arm Striking Sideways.

Starting Position is taken on the command:

Left (R.) Knee Upbending and Arms Forw.—Bend! (See pars. 901-838.

The exercise is carried out on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1025. Yard, Crook Half-St.....Hand Turning Upward.
Starting Position is taken on the command:
Left (R.) Knee Upbending and Arms Sidew.—Raise! (See pars. 901-835.)

The exercise is carried out on the commands:
Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.).

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Sink!

1026. Backward Walk Half-St.....Arm Raising Sideways.
Starting Position is taken on the command:
Left (R.) Leg Backw.—Raise! (See par. 902.)

The exercise is carried out on the commands:
Arms Sidew.—Raise! *Arms Downw.*—Sink! (See par. 835.)

Standing Position is returned to on the command:
Feet Together—Place!

Note.—Arm Raising Forward and Upward or Sideways and Upward, can also be carried out in the above Starting Position.

1027. Bend, Backward Walk Half-St.:.....Arm Stretching Upward.
Starting Position is taken on the command:
Left (R.) Leg Backw. Raising and Arms—Bend! (See pars. 902-837.)

The exercise is carried out on the commands:
Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Sideways, Backward or Forward, can also be carried out in the above Starting Position.

1028. Stretch, Backward Walk Half-St.....Arm Parting.
Starting Position is taken on the command:
Left (R.) Leg Backw. Raising and Arms Forw. and Upw.—Raise! (See pars. 902-885.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the command:
Feet Together and Arms Forw. and Downw.—Sink!

1029. Forward Bend, Backward Walk Half-St.: Arm Striking Sideways.

Starting Position is taken on the command:

Left (*R.*) *Leg Backw. Raising and Arms Forw.*—Bend! (See pars. 902-838.)

The exercise is carried out on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

1030. Yard, Backward Walk Half-St.: Hand Turning Upward.

Starting Position is taken on the command:

Left (*R.*) *Leg Backw. Raising and Arms Sidew.*—Raise! (See pars. 902-835.)

The exercise is carried out on the commands:

Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

1031. Forward Walk Half-St.....Arm Raising Forward.

Starting Position is taken on the command:

Left (*R.*) *Leg Forward*—Raise! (See par. 903.)

The exercise is carried out on the commands:

Arms Forw.—Raise! *Arms Downw.*—Sink! (See par. 836.)

Standing Position is returned to on the command:

Feet Together—Place!

Note.—Arm Raising Sideways, Sideways and Upward or Forward and Upward can also be carried out in the above Starting Position.

1032. Bend, Forward Walk Half-St.: Arm Stretching Sideways.

Starting Position is taken on the command:

Left (*R.*) *Leg Forw. Raising and Arms*—Bend! (See pars. 903-837.)

The exercise is carried out on the commands:

Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch.

Note.—Arm Stretching Upward, Forward or Backward can also be carried out in the above Starting Position.

1033. Stretch, Forward Walk Half-St.....Arm Parting.

Starting Position is taken on the command:

Left (*R.*) *Leg Forw. Raising and Arms Forw. and Upw.*—Raise! (See pars. 903-875.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the command:
Feet Together and Arms Forw. and Downw.—Sink!

1034. Forward Bend, Forward Walk Half-St.: Arm Striking Sideways.

Starting Position is taken on the command:
Left (*R.*) *Leg Forw. Raising and Arms Forw.*—Bend! (See pars. 903-838.)

The exercise is carried out on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1035. Yard, Forward Walk Half-St.: Hand Turning Upward.

Starting Position is taken on the command:
Left (*R.*) *Leg Forw. Raising and Arms Sidew.*—Raise! (See pars. 903-835.)

The exercise is carried out on the commands:
Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Sink!

1036. Stride, Half-St.....Arms Raising Sideways.

Starting Position is taken on the command:
Left (*R.*) *Leg Sidew.*—Raise! (See par. 904.)

The exercise is carried out on the commands:
Arms Sidew.—Raise! *Arms Downw.*—Sink!

Standing Position is returned to on the command:
Feet Together—Place!

Note.—Arm Raising Forward, Forward and Upward, Sideways and Upward, Neck Rest, Hips Firm, Arm Bending or Arm Bending Forward, can also be carried out in the above Starting Position.

1037. Bend, Stride Half-St.....Arm Stretching Upward.

Starting Position is taken on the command:
Left (*R.*) *Leg Sidew. Raising and Arms*—Bend! (See pars. 904-837.)

The exercise is carried out on the commands:
Arms Upw.—Stretch! *Arms*—Bend! (See par. 876.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Sideways, Forward or Backward can also be carried out in the above Starting Position.

1038. Stretch, Stride Half-St. . . . . Arm Parting.
Starting Position is taken on the command:
Left (R.) Leg Sidew. Raising and Arms Forw. and Upw.—Raise! (See pars. 904-885.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the command:
Feet Together and Arms Forw. and Down.—Sink!

1039. Forward Bend, Stride Half-St.: Arm Striking Sideways.
Starting Position is taken on the command:
Left (R.) Leg Sidew. Raising and Arms Forw.—Bend! (See pars. 904-838.)

The exercise is carried out on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1040. Bend, Horizontal Toe Support St.: Arm Stretching Sideways (Upward).
Starting Position is taken on the command:
Left (R.) Foot Hor. Toe Support and Arms—Bend! (See pars. 905-837.)

The exercise is carried out on the commands:
Arms Sidew. (Upw.)—Stretch! *Arms*—Bend! (See pars. 875-876.)

Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1041. Stretch, Horizontal Toe Support St. . . . . Arm Parting.
Starting Position is taken on the command:
Left (R.) Foot Hor. Toe Support and Arms Forw. and Upw.—Raise! (See pars. 905-885.)

The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the command:
Feet Together and Arms Forw. and Downw.—Sink!

Note.—Arm Swinging Forward and Upward can also be carried out in the above Starting Position.

1042. Forward Bend, Horizontal Toe Support St.: Arm Striking Sideways.
Starting Position is taken on the command:
Left (R.) Foot Hor. Toe Support and Arms Forw.—Bend! (See pars. 905-838.)

The exercise is carried out on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1043. Yard, Horizontal Toe Support St.: Hand Turning Upward.
Starting Position is taken on the command:
Left (*R.*) *Foot Hor. Toe Support and Arms Sidew.*—Raise! (See pars. 905-835.)
The exercise is carried out on the commands:
Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.)
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

1044. Horizontal Half-St.....Arm Raising Sideways.
Starting Position is taken on the command:
Left (*R.*) *Foot Hor. Half-St.*—Place! (See par. 905.)
The exercise is carried out on the commands:
Arms Sidew.—Raise! *Arms Downw.*—Sink!
Standing Position is returned to on the command:
Feet Together—Place!

Note.—Arm Raising Forward and Upward or Arm Raising Sideways and Upward can also be carried out in the above Starting Position.

1045. Bend, Horizontal Half-St.....Arm Stretching Sideways.
Starting Position is taken on the command:
Left (*R.*) *Foot Hor. Half-St. and Arms*—Bend! (See pars. 906-837.)
The exercise is carried out on the commands:
Arms Sidew.—Stretch! *Arms*—Bend! (See par. 875.)
Standing Position is returned to on the command:
Feet Together and Arms Downw.—Stretch!

Note.—Arm Stretching Upward, Backward or Forward can also be carried out in the above Starting Position.

1046. Stretch, Hor. Half-St.....Arm Parting.
Starting Position is taken on the command:
Left (*R.*) *Foot Hor. Half-St. and Arms Forw. and Upw.*—Raise! (See pars. 906-885.)
The exercise is carried out by numbers as in par. 889.
Standing Position is returned to on the command:
Feet Together and Arms Forw. and Downw.—Sink!

1047. Forward Bend, Horizontal Half-St.: Arm Striking Sideways.

Starting Position is taken on the command:

Left (*R.*) *Foot Hor. Half-St. and Arms Forw.*—Bend! (See pars. 906-838.)

The exercise is carried out on the commands:

Arms Sidew.—Strike! *Arms Forw.*—Bend! (See par. 879.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

1048. Yard, Horizontal Half-St.: Hand Turning Upward.

Starting Position is taken on the command:

Left (*R.*) *Foot Hor. Half-St. and Arms Sidew.*—Raise! (See pars. 906-835.)

The exercise is carried out on the commands:

Hands Upw.—Turn! *Hands Downw.*—Turn! (See par. 890.)

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

1049. Wing, Crook Half-St. . . . . Knee Stretching Backward.

Starting Position is taken on the command:

Left (*R.*) *Knee Upbending and Hips*—Firm! (See pars. 901-834.)

The exercise is carried out on the commands:

Left (*R.*) *Knee Backw.*—Stretch!

Maintaining the balance, the named knee is stretched backward keeping the upper body erect.

Knee Upw.—Bend!

The knee is carried forward and bent upward to the First Position.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

1050. Bend, Crook Half-St. . . . . Knee Stretching Forward.

Starting Position is taken on the command:

Left (*R.*) *Knee Upbending and Arms*—Bend! (See pars. 901-837.)

The exercise is carried out on the commands:

Left (*R.*) *Knee Forw.*—Stretch!

The named knee is stretched forward to the Horizontal Position in front of the body.

Knee Upw.—Bend.

The leg is bent and carried back to the first Position.

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

1051. Forward Bend, Crook Half-St.: Knee Stretching Forward with Arm Striking.

Starting Position is taken on the command:

Left (*R.*) *Knee Upbending and Arms Forw.*—Bend! (See pars. 901-838.)

The exercise is carried out on the commands:

Knee Forw. Stretching and Arms Sidew.—Strike! (See pars. 1050-879.)

Knee Upbending and Arms Forw.—Bend!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Stretch!

1052 Yard, Crook Half-St.: Hand-Turning Upward with Knee Stretching Forward.

Starting Position is taken on the command:

Left (*R.*) *Knee Upbending and Arms Sidew.*—Raise! (See pars. 901-835.)

The exercise is carried out on the commands:

Knee Stretching Forw. and Hands Upw.—Turn! (See pars. 1050-890.)

Knee Upbending and Hands Downw.—Turn!

Standing Position is returned to on the command:

Feet Together and Arms Downw.—Sink!

1053. Stretch, Crook Half-St.: Knee Stretching Forward with Arm Parting.

Starting Position is taken on the command:

Left (*R.*) *Knee Upbending and Arms Forw. and Upw.*—Raise! (See pars. 901-885.)

The exercise is carried out by numbers as in pars. 1050-889.

Standing Position is returned to on the command:

Feet Together and Arms Forw. and Downw.—Sink!

Note.—The Arm Exercises in pars. 879-875-876 can also be carried out with Knee Stretching Backward as in par. 1049.

Exercises Carried Out in the Stoop Falling Positions.

The Starting Position. The Exercise.

1054. Stoop Falling . . . . . Arm Bending.

Starting Position is taken on the command:

Stoop Falling—Place! (See par. 855.)

The exercise is carried out on the commands:

Arms—Bend!

By bending the arms at the elbow joints, the body is lowered between the arms so that the chest is just clear of the deck; the elbows are turned out; legs and trunk in a straight line with the chin drawn in.

Arms—Stretch!

Without changing the position of the body, the arms are straightened and the body raised to the First Position.

Standing Position is returned to on the command:

Attention!

Note.—At first the Arm Bending is carried out so that the body touches the deck, as the class progresses the Arm Bending is carried out clear of the deck as above.

1055. Stoop Falling.....Feet Placing Forward.

Starting Position is taken as in par. 855 on the command:

Stoop Falling—Place!

The exercise is carried out on the commands: *Feet Forw.*—Place!

By pushing off from the deck, both feet are carried forward to the Crouch Sitting Position. (Fig. 856.)

Feet Backw.—Place!

By taking the weight of the body on the arms, the legs are stretched backward to the Stoop Falling Position.

Standing Position is returned to on the command:

Attention!

Note.—Alternate Foot Placing Forward can also be carried out in the Stoop Falling Position on the commands:

Left (R.) Foot Forw.—Place!

Feet Together—Place!

1056. Stoop Falling.....Feet Changing with a Jump.

Starting Position is taken on the commands: *Stoop Falling*—Place!

Left (R.) Foot Forw.—Place!

Feet Changing with a Jump by Numbers—One! Two!

At count One, the forward foot is carried backward at the same time the backward foot is carried forward.

At count Two, the feet are again changed and so on.

Feet Together—Place!

Standing Position is returned to on the command:

Attention!

1057. Stoop Falling.....Feet Placing Sideways with a Jump.
Starting Position is taken on the command:
Stoop Falling—Place! (See par. 855.)

The exercise is carried out on the commands:
Feet Sidew. with a Jump—Place!

By pushing off with the feet the legs are parted sideways and placed on the deck. The distance between the feet should be about two foot lengths.
Feet Together with a Jump—Place!

The feet are carried in to the First Position.

Standing Position is returned to on the command:
Attention!

1058. Stoop Falling.....Leg Raising Backward.
Starting Position is taken on the command:
Stoop Falling—Place! (See par. 855.)

The exercise is carried out on the commands:
Left (*R.*) *Leg Backw.*—Raise! *Feet Together*—Place! (See par. 902.)

Standing Position is returned to on the command:
Attention!

1059. Stoop Falling: Leg Raising Backward with Arm Bending.
Starting Position is taken on the command:
Stoop Falling—Place! (See par. 855.)

The exercise is carried out on the commands:
Left (*R.*) *Leg Backw. Raising and Arms*—Bend! (See pars. 902-1045.)
Feet Together and Arms—Stretch!

Standing Position is returned to on the command:
Attention!

1060. Stoop Falling: Feet Placing Sideways with a Jump with Arm Bending.
Starting Position is taken on the command:
Stoop Falling—Place! (See par. 855.)

The exercise is carried out on the commands:
Feet Sidew. with a Jump and Arms—Bend! (See pars. 1057-1045.)
Feet Together with a Jump and Arms—Stretch!

Standing Position is returned to on the command:
Attention!

1061. Stoop Falling.....Change to Side Falling.
Starting Position is taken on the command:
Stoop Falling—Place!

The exercise is carried out on the commands:
Change to Side Falling on Left (R.) Arm—Turn! (See par. 858.)
Change to Stoop Falling on Left (R.) Arm—Turn!

Standing Position is returned to on the command:
Attention!

Note.—Changing to Back Stoop Falling can also be carried out in the above Starting Position, as in par. 857, on the commands:
Change to Back Stoop Falling on Left (R.) Arm—Turn!
Change to Stoop Falling on Left (R.) Arm—Turn!

1062. Stoop Falling..... Hand Clapping.
Starting Position is taken on the command:
Stoop Falling—Place!

The exercise is carried out by numbers on the commands:
Hand Clapping by Numbers—One! Two!

At count One, by pushing off from the deck with the hands the body is thrown upward and the hands struck together, then the hands are placed on the deck to the First Position.

At count Two, the exercise is repeated and so on.

Standing Position is returned to on the command:
Attention!

Note.—Hand Lifting can also be carried out in the above Starting Position on the commands:
Hand Lifting by Numbers—One! Two! Three! Four!

At count One, the left arm is raised off the deck straight upward so that the hand is directly under the left shoulder.

At count Two, the hand is lowered to the deck.

At count Three, the other arm is raised in the same manner.

At count Four, the arm is lowered, and so on.

1063. Bend, Stoop Falling: Feet Placing Sideways with a Jump.
Starting Position is taken on the commands:
Stoop Falling—Place! (See par. 855.) *Arms*—Bend (See par. 1045.)

The exercise is carried out as in par. 1057, on the commands:
Feet Sidew. with a Jump—Place!
Feet Together with a Jump—Place!

Standing Position is returned to on the commands:
Arms—Stretch! Attention!

Note.—Feet Placing Sidew. with a Jump with Arm Stretching can also be carried out in the above Starting Position, on the commands:
Feet Sidew. with a Jump and Arms—Stretch!
Feet Together with a Jump and Arms—Bend!

1064. Bend, Stoop Falling.....Leg Raising Backward.
Starting Position is taken on the commands:
Stoop Falling—Place! *Arms*—Bend! (See pars. 855-1045.)
The exercise is carried out on the commands:
Left (R.) Leg Backw.—Raise! *Feet Together*—Place! (See par. 902.)
Standing Position is returned to on the commands:
Arms—Stretch! Attention!

1065. Stoop Falling.....Change to Stoop Falling.
Starting Position is taken on the command:
Stoop Falling—Place!
The exercise is carried out on the command:
Change to Stoop Falling on Left (R.) Arm—Turn!
The body is turned on the named arm as in par. 858, to the Back Stoop Falling, the movement is continued in the same direction and the body turned on the other arm to the Stoop Falling Position.
Then the exercise is carried out in the opposite direction.
Standing Position is returned to on the command:
Attention!

Exercises Carried Out in the Side Falling Position.

The Starting Position. The Exercise.
1066. Wing, Side Falling.....Leg Raising Sideways.
Starting Position is taken on the commands:
Stoop Falling—Place!
Change to Side Falling on Left (R.) Arm and Hip—Firm! (See pars. 858 834.)
The exercise is carried out on the commands:
Left (R.) Leg Sidew.—Raise! *Feet Together*—Place! (See par. 904.)
Then the Side Falling is taken on the other arm and the exercise repeated.
Standing Position is returned to on the commands:
Change to Stoop Falling—Place! Attention!
Note.—The Leg Raising Sideways can also be carried out in the Bend, or Stretch Side Falling Position.

1067. Bend, Side Falling: Leg Raising Sideways with Arm Stretching Upward.
Starting Position is taken on the commands:
Stoop Falling—Place!

Change to Side Falling on Left (R.) Arm and Right (L.) Arm—Bend! (See pars. 858-837.)

The exercise is carried out on the commands:

Left (R.) Leg Sidew. Raising and Arm Upw.—Stretch! (See pars. 904-876.)

Feet Together and Arm—Bend!

Standing Position is returned to on the commands:

Change to Stoop Falling—Place! Attention!

1068. Side Falling.....Arm Raising Forward and Upward.

Starting Position is taken on the commands:

Stoop Falling—Place!

Change to Side Falling on Left (R.) Arm—Turn! (See par. 858.)

The exercise is carried out as in par. 885, on the commands:

Arm Forw. and Upw.—Raise! *Arm Forw. and Downw.*—Sink!

Standing Position is returned to on the commands:

Change to Stoop Falling—Place! Attention!

Note.—All exercises in the Side Falling are carried out on both sides.

1069. Wing, Side Falling.....Knee Upbending.

Starting Position is taken on the commands:

Stoop Falling—Place!

Change to Side Falling on Left (R) Arm and Right (L.) Hip—Firm! (See pars. 855-834.)

The exercise is carried out as in par. 901, on the commands:

Left (R.) Knee Upw.—Bend! *Feet Together*—Place!

Standing Position is returned to on the commands:

Change to Stoop Falling—Place! Attention!

Note.—Leg Raising Forward or Backward can also be carried out in the above Starting Position.

1070. Wing Side Falling.....Traveling in a Circle Forward.

Starting Position is taken as in preceding paragraph.

Traveling in a Circle by Numbers—One! Two!

At count One, the lower foot is carried forward in a circle and placed on the deck, using the supporting arm as a pivot.

At count Two, the other foot is carried forward and placed on the deck and so on until the starting point is reached; the circle being completed in eight counts.

Standing Position is returned to on the commands:

Change to Stoop Falling—Place! Attention!

Exercises Carried Out in the Back Stoop Falling Position

The Starting Position. The Exercise.

1071. Back Stoop Falling: Leg Raising Forward (Knee Upbending).
Starting Position is taken on the commands:
Stoop Falling—Place!
Change to Back Stoop Falling on Left (R.) Arm—Turn! (See par. 857.)

The exercise is carried out on the commands:
Left (R.) Leg Forw.—Raise! (See par. 903.)
(*Left (R.) Knee Upw.*—Bend!) (See par. 901.) *Feet Together*—Place!

Standing Position is returned to on the commands:
Change to Stoop Falling on Left (R.) Arm—Turn! Attention!

Note.—Feet Placing Sideways with a Jump can also be carried out in the above Starting Position.

1072. Back Stoop Falling.....Change to Stoop Falling.
Starting Position is taken as in preceding paragraph.

The exercise is carried out on the commands:
Change to Stoop Falling on Left (R.) Arm—Turn!

The body is turned on the named arm to the Stoop Falling Position.
Change to Back Stoop Falling—Place!

The body is turned in the opposite direction to the Back Stoop Falling Position.

Standing Position is returned to on the commands:
Change to Stoop Falling—Place! Attention!

1073. Back Stoop Falling.....Change to Back Stoop Falling.
Starting Position is taken as in par. 1071, on the commands:
Stoop Falling—Place!
Change to Back Stoop Falling on Left (R.) Arm—Turn!

The exercise is carried out on the commands:
Change to Back Stoop Falling on Left (R.) Arm—Turn!

The body is turned on the named arm to the Stoop Falling Position, the movement continued in the same direction and the body turned on the other arm to the Back, Stoop Falling Position.

Standing Position is returned to on the commands:
Change to Stoop Falling—Place! Attention!

Exercises Carried Out in the Forward Lying Position.

The Starting Position. The Exercise.

1074. Wing, Forward Lying.....Trunk Bending Backward.

Starting Position is taken on the commands:

Forw. Lying—Place! (See par. 860.) *Hips.*—Firm! (See par. 834.)

The exercise is carried out as in par. 852, on the commands:

Trunk Backw.—Bend! *Trunk Upw.*—Stretch!

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

Note.—Trunk Bending Backward can also be carried out in the Bend, Rest, Yard or Stretch, Forward Lying Positions.

1075. Bend, Forward Lying: Trunk Bending Backward with Arm Stretching Upward.

Starting Position is taken on the commands:

Forward Lying—Place! (See par. 860.) *Arms*—Bend! (See par. 837.)

The exercise is carried out on the commands:

Trunk Backw. Bending and Arms Upw.—Stretch! (See pars. 852-876.)

Trunk Upw. Stretching and Arms—Bend!

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

Note.—Arm Stretching Sideways or Downward in combination with Trunk Bending Backward can also be carried out in the above Starting Position.

1076. Rest Forward Lying.....Leg Raising Backward.

Starting Position is taken on the commands:

Forw. Lying—Place! (See par. 860.) *Neck*—Rest!

The exercise is carried out as in par. 902, on the commands:

Left (*R.*) *Leg Backw.*—Raise! Feet Together—Place!

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

1077. Rest Forward Lying.....Legs Raising Backward.

Starting Position is taken as in preceding paragraph.

The exercise is carried out on the commands:

Legs Backw.—Raise! *Legs Downw.*—Sink! (See par. 902.)

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

1078. Bend, Forward Lying: Legs Raising Backward with Trunk Bending Back.

Starting Position is taken on the commands:

Forw. Lying—Place! (See par. 860.) *Arms*—Bend! (See par. 837.)

The exercise is carried out on the commands:

Trunk Backw. Bending and Legs Backw.—Raise! (See pars. 852-902.)

Trunk Upw. Stretching and Legs Downw.—Sink!

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

Note 1.—The exercise can also be carried out in the Rest Stretch or Wing, Forward Lying Position.

Note 2.—The exercise can also be carried out in combination with Arm Stretching Upward (Sideways) on the commands:

Trunk and Legs Backw. and Arms Upw. (Sidew.)—Stretch!

Trunk Upw. Stretching, Legs Sinking and Arms—Bend!

1079. Stretch, Forward Lying: Trunk Bending Backward with Arm Parting.

Starting Position is taken on the commands:

Forw. Lying—Place! (See par. 860.) *Arms Upw.*—Stretch! (See par. 876.)

The exercise is carried out by numbers on the commands:

Trunk Bending Backw. with Arm Parting by Numbers—One! Two!

At count One, the trunk is bent backward as in par. 852, at the same time the arms are parted as in par. 889.

At the count Two, the trunk is stretched upward and the arms are raised to Stretch Position, and so on.

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

1080. Wing Arch, Forward Lying.....Change to Neck Rest.

Starting Position is taken on the commands:

Forw. Lying—Place! *Hips*—Firm! *Trunk Backw.*—Bend!

The exercise is carried out on the commands:

Change to Neck—Rest! *Change to Hips*—Firm!

Standing Position is returned to on the commands:

Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Note.—The exercise can also be carried out by changing to Arms Bend or Arms Forward Bend.

1081. Arch, Forward Lying.....Arm Bending Forward.
Starting Position is taken on the commands:
Forw. Lying—Place! (See par. 860.)
Trunk Backw.—Bend! (See par. 852.)
The exercise is carried out on the commands:
Arms Forw.—Bend! (See par. 838.) *Arms Downw.*—Stretch!
Standing Position is returned to on the commands:
Trunk Upw.—Stretch! Attention!

Note.—Arm Stretching Upward, Neck Rest or Arm Bending can also be carried out in the above Starting Position.

1082. Bend, Arch Forward Lying.....Arm Stretching Sideways.
Starting Position is taken on the commands:
Forw. Lying—Place! *Arms*—Bend! *Trunk Backw.*—Bend!
The exercise is carried out on the commands:
Arms Sidew.—Stretch! *Arms*—Bend!
Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downward*—Stretch! Attention!

Note.—Arm Stretching Upward or Backward can also be carried out in the Bend, Arch, Forward Lying Position.

1083. Forward Bend, Arch, Forward Lying: Arm Striking Sideways.
Starting Position is taken on the commands:
Forw. Lying—Place! (See par. 860.)
Trunk Backw. Bending and Arms Forw.—Bend! (See pars. 852-838.)
The exercise is carried out as in par. 879, on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend!
Standing Position is returned to on the commands:
Trunk Upw. Stretching and Arms Downw.—Stretch! Attention!

1084. Yard, Arch, Forward Lying.....Hand Turning Upward.
Starting Position is taken on the commands:
Forw. Lying—Place! *Arms Sidew.*—Raise! *Trunk Backw.*—Bend!
The exercise is carried out as in par. 890, on the commands:
Hands Upw.—Turn! *Hands Downw.*—Turn!
Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Sink! Attention!

1085. Stretch, Arch, Forward Lying.....Arm Parting.
Starting Position is taken on the commands:
Forw. Lying—Place! *Arms Upw.*—Stretch! *Trunk Backw.*—Bend!
The exercise is carried out by numbers as in par. 889.

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Exercises Carried Out in the Lying Positions.

The Starting Position. The Exercise.

1086. Lying.....Trunk Bending Forward.

Starting Position is taken on the commands:
Stoop Falling—Place! *Change to Lying on Left* (*R.*) *Arm*—Turn! (See par. 859.)

The exercise is carried out as in par. 851, on the commands:
Trunk Forw.—Bend! *Trunk Upw.*—Stretch!

Standing Position is returned to on the commands:
Change to Stoop Falling on Left (*R.*) *Arm*—Turn! Attention!

Note.—Trunk Bending Forward can also be carried out in the Wing, Rest or Stretch Lying Positions.

1087. Stretch Lying: Trunk Bending Forward and Downward.

Starting Position is taken on the commands:
Stoop Falling—Place! *Change to Lying on Left* (*R.*) *Arm*—Turn! (See par. 859.)
Arms Upw.—Stretch! (See par. 876.)

The exercise is carried out as in par. 898, on the commands:
Trunk Forw. and Downw.—Bend!
Trunk Forw. and Upw.—Stretch!

Standing Position is returned to on the commands:
Arms Downw.—Stretch!
Change to Stoop Falling on Left (*R.*) *Arm*—Turn! Attention!

Note.—Trunk Bending Forward and Downward can also be carried out in the Wing, Rest or Bend Lying Positions.

1088. Wing Lying.....Leg (Legs) Raising Forward.

Starting Position is taken on the commands:
Stoop Falling—Place!
Change to Lying on Left (*R.*) *Arm*—Turn! (See par. 859.) *Hips*—Firm!

The exercise is carried out on the commands:
Left (*R.*) *Leg Forw.*—Raise! (See par. 903.) *Feet Together*—Place! (*Legs Forw.*—Raise!) (*Legs Downw.*—Sink!)

Standing Position is returned to on the commands:
Arms Downw.—Stretch!
Change to Stoop Falling on Left (*R.*) *Arm*—Turn! Attention!

Note.—Leg (Legs) Raising Forward can also be carried out in the Bend, Rest, Stretch or Yard Lying Positions.

1089. Rest Lying.....Knee (Knees) Upbending.

Starting Position is taken on the commands:

Stoop Falling—Place!

Change to Lying on Left (*R.*) *Arm*—Turn! (See par. 859.) *Neck*—Rest!

The exercise is carried out on the commands:

Left (*R.*) *Knee Upw.*—Bend! (See par. 901.) *Feet Together*—Place! (*Knees Upw.*—Bend!) (*Knees Downw.*—Stretch!)

Standing Position is returned to on the commands:

Arms Downw.—Stretch!

Change to Stoop Falling on Left (*R.*) *Arm*—Turn! Attention!

Note.—Knee (Knees) Upbending can also be carried out in the Wing, Bend or Stretch Lying Positions.

1090. Stretch Lying with Heels Clear of Deck: Legs Raising Forward.

Starting Position is taken on the commands:

Stoop Falling—Place! *Change to Lying on Left* (*R.*) *Arm*—Turn! *Arms Upw.*—Stretch! *Heels Clear of the Deck*—Raise!

The exercise is carried out on the commands:

Legs Forw.—Raise!

Legs Clear of the Deck—Sink!

The legs are lowered to about four inches of the deck.

Standing Position is returned to on the commands:

Heels to the Deck—Sink! *Arms Downw.*—Stretch!

Change to Stoop Falling on Left (*R.*) *Arm*—Turn! Attention!

Note.—The exercise can also be carried out in the Bend, Rest or Wing Lying Positions.

1091. Wing Lying with Heels Clear of the Deck: Leg Parting.

Starting Position is taken on the commands:

Stoop Falling—Place! *Change to Lying on Left* (*R.*) *Arm*—Turn! *Hips*—Firm! *Heels Clear of the Deck*—Raise!

The exercise is carried out by numbers on the commands:

Leg Parting by Numbers—One! Two!

At count One the legs are parted sideways, with knees straight.

At count Two they are brought together, and so on.

Standing Position is returned to on the commands:

Heels to the Deck—Sink! *Arms Downw.*—Stretch!

Change to Stoop Falling on Left (R.) Arm—Turn! Attention!

Note.—Leg Parting can also be carried out in the Rest, Bend or Stretch Lying Positions.

1092. Wing Lying with Heels Clear of the Deck: Legs Raising Forward and Parting.

Starting Position is taken as in preceding paragraph.

The exercise is carried out by numbers on the commands:

Legs Raising Forw. and Parting by Numbers—One! Two! Three! Four!

At count One the legs are raised forward, at count Two they are parted sideways, at Three they are brought together, and at Four they are lowered clear of the deck and so on.

Standing Position is returned to as in preceding paragraph.

Note.—The exercise can also be carried out in the Stretch, Rest or Bend Lying Positions.

1093. Wing Lying.....Alternate Leg Changing.

Starting Position is taken as in par. 1086, but with the difference one leg is raised forward.

The exercise is carried out by numbers on the commands:

Leg Changing by Numbers—One! Two!

At count One the leg which was raised is lowered and at the same time the other leg is raised forward, at count Two the legs are again changed, and so on.

Standing Position is returned to on the commands:

Feet Together—Place! *Arms Downw.*—Stretch!

Change to Stoop Falling on Left (R.) Arm—Turn! Attention!

Note.—The exercise can also be carried out in the Rest, Bend, or Stretch Lying Positions.

Exercises Carried Out in the Stride Kneeling Positions

The Starting Position. The Exercise.

1094. Rest, Stride Kneeling.....Trunk Twisting.

Starting Position is taken on the commands:

Stride Kneeling—Place! (See par. 861.) *Neck*—Rest! (See par. 840.)

The exercise is carried out as in par. 853, on the commands:

Trunk to the Left (R.)—Twist! *Trunk Forward*—Twist!

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

Note 1.—The Trunk Twisting can also be carried out in the Stretch, Bend, Forward Bend or Wing, Stride Kneeling Positions.

Note 2.—Trunk Bending sideways can also be carried out in the above Starting Positions as in par. 854.

FIG. 530. Rest, Fall, Stride Kneeling

1095. Rest, Stride Kneeling: Trunk Falling Backward.

Starting Position is taken as in preceding paragraph.

The exercise is carried out on the commands:

Trunk Backw.—Fall!

By hinging at the knee joints the trunk is slowly lowered backward, the chin is drawn in and the trunk is held in a straight line with the upper legs (See Fig. 530.)

Trunk Upw.—Stretch!

The Trunk is slowly raised to the first position.

Standing Position is returned to on the commands:

Arms Downw.—Stretch! Attention!

Note. The exercise can also be carried out in the Wing, Stretch, Yard, Bend or Forward Bend, Stride Kneeling Positions.

1096. Forward Bend, Twist, Stride Kneeling: Arm Striking Sideways.

Starting Position is taken on the commands:

Stride Kneeling—Place! (See par. 861.) *Arms Forw.*—Bend! (See par. 838.)

Trunk to the Left (R.)—Twist! (See par. 853.)

The exercise is carried out as in par. 879.

Standing Position is returned to on the commands:

Trunk Forw.—Twist! *Arms Downw.*—Stretch! Attention!

Note.—The Bend, Twist, Stride Kneeling Position can also be taken, and then arm stretching in various directions carried out.

1097. Forward Bend, Side Bend, Stride Kneel: Arm Striking Sideways.

Starting Position is taken on the commands:
Stride Kneeling—Place! (See par. 861.) *Arms Forw.*—Bend! (See par. 838.)
Trunk to the Left (R.)—Bend! (See par. 854.)

The exercise is carried out as in par. 879, on the commands:
Arms Sidew.—Strike *Arms Forw.*—Bend!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Note.—Arm Stretching in various directions can be carried out in the Bend, Side Bend, Stride Kneeling Position.

1098. Stride Kneeling: Trunk Falling Backward with Arm Raising Sideways.

Starting Position is taken on the command:
Stride Kneel—Place! (See par. 861.)

The exercise is carried out on the commands:
Trunk Backw. Falling and Arms Sidew.—Raise! (See pars. 1095-835.)
Trunk Upw. Stretching and Arms Downw.—Sink!

Standing Position is returned to on the command:
Attention!

Note.—Trunk Falling Backward can also be carried out with Arm Raising Forward and Upward, Sideways and Upwards, Hips Firm, Arm Bending, Neck Rest or Arm Bending Forward.

1099. Wing, Fall, Stride Kneeling: Change to Neck Rest.

Starting Position is taken on the commands:
Stride Kneeling—Place! (See par. 861.) *Hips*—Firm!
Trunk Backw.—Fall! (See par. 1095.)

The exercise is carried out on the commands:
Change to Neck—Rest! *Change to Hips*—Firm!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Note.—Changing to Arms Bend or Arms Forward Bend, can also be carried out in the above Starting Position.

1100. Bend, Fall, Stride Kneeling: Arm Stretching Sideways.

Starting Position is taken on the commands:
Stride Kneeling—Place! (See par. 861.) *Arms*—Bend!
Trunk Backw.—Fall! (See par. 1095.)

The exercise is carried out as in par. 875, on the commands:
Arms Sidew.—Stretch! *Arms*—Bend!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Note.—Arm Stretching Upward, Backward or Forward, can also be carried out in the above Starting Position.

1101. Forward Bend, Fall, Stride Kneeling: Arm Striking Sideways.
Starting Position is taken on the commands:
Stride Kneeling—Place! *Arms Forw.*—Bend! *Trunk Backw.*—Fall!

The exercise is carried out as in par. 879, on the commands:
Arms Sidew.—Strike! *Arms Forw.*—Bend!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

1102. Stretch, Fall, Stride Kneeling: Arm Parting.
Starting Position is taken on the commands:
Stride Kneeling—Place! *Arms Upw.*—Stretch! *Trunk Backw.*—Fall!

The exercise is carried out by the numbers as in par. 889.

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Stretch! Attention!

Note.—Arm Swinging Forward and Upward can also be carried out in the above Starting Position.

1103. Yard, Fall, Stride Kneeling: Hand Turning Upward.
Starting Position is taken on the commands:
Stride Kneeling—Place! *Arms Sidew.*—Raise! *Trunk Backw.*—Fall!

The exercise is carried out as in par. 890, on the commands:
Hand Upw.—Turn! *Hands Downw.*—Turn!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! *Arms Downw.*—Sink! Attention!

1104. Fall, Stride Kneeling: Arm Raising Forward and Upward.
Starting Position is taken on the commands:
Stride Kneeling—Place! *Trunk Backw.*—Fall!

The exercise is carried out as in par. 885, on the commands:
Arms Forw. and Upw.—Raise! *Arms Forw. and Downw.*—Sink!

Standing Position is returned to on the commands:
Trunk Upw.—Stretch! Attention!

Note.—Arm Raising Sideways and Upward can also be carried out in the above Starting Position.

Exercises Carried Out in the Crouch Sitting Positions.

The Starting Position. The Exercise.

1105. Crouch Sitting.....Foot Placing Sideways.

Starting Position is taken on the command:

Crouch Sitting—Place! (See par. 856.)

The exercise is carried out on the commands:

Left (*R.*) *Foot Sidew.*—Place!

The named foot is placed directly sideways and placed on the deck; leg straight, toes pointed and the position of the rest of the body unaltered.

Feet Together—Place!

The foot is carried in to the First Position without raising the hips.

Standing Position is returned to on the command:

Attention!

1106. Crouch Sitting.....Feet Placing Backward.

Starting Position is taken as in preceding paragraph.

The exercise is carried out as in par. 855 on the commands:

Feet Backw.–Place! *Feet Forw.*—Place!

Standing Position is returned to on the command:

Attention!

Note.—Alternate Foot Placing Backward can also be carried out in the above Starting Position, on the commands:

Left (*R.*) *Foot Backw.*—Place!

The named foot is placed backward as above.

Feet Together—Place!

The foot is carried forward to the First Position.

1107. Crouch Sitting.....Knee Stretching.

Starting Position is taken on the command:

Crouch Sitting—Place!

The exercise is carried out on the commands:

Knees—Stretch!

Keeping the feet and hands in place on the deck, the knees are stretched upward until the legs are straight.

Knees—Bend!

The knees are bent downward to the First Position.

Standing Position is returned to on the command:

Attention!

1108. Crouch Sitting.....Feet Changing with a Jump.

Starting Position is taken on the command:

Crouch Sitting—Place!

Left (R.) Foot Backw.—Place!

The exercise is carried out by numbers on the commands:

Feet Changing with a Jump by Numbers—One! Two!

At count One, the forward foot is placed backward and at the same time the backward foot is placed forward; both feet are off the deck at the same time.

At count Two, the feet are again changed in the same manner and so on.

Standing Position is returned to on the commands:

Left (R.) Foot Forw.—Place! Attention!

Jumping Exercises Carried Out in the Standing and Spring Standing Positions

The Starting Position. The Exercise.

1109. Standing.....Jumping in Height.

The exercise is carried out by numbers, on the commands:

Jumping in Height by Numbers—One! Two! Three! Four! Five!

At count One, the heels are raised. (See par. 848.) Toe Standing Position.

At count Two, the knees are bent. (See par. 849.) Spring Standing Position.

At count Three, the jumping in height is executed by pushing off from the deck with both feet. The body is thrown upward as far as possible, and when the feet again touch the deck the Spring Standing Position is assumed maintaining the balance.

At count Four, the knees are stretched.

At count Five, the heels are lowered to the Standing Position.

Note 1.—Jumping in Height can also be carried out in the Wing, Yard, Rest or Bend Standing Positions.

Note 2.—The exercise can also be carried out with ¼ Turning or ½ Turning Left (R.); the Turnings are executed on the third count as the body is thrown upward, on the commands:

Jumping in Height with ¼ (½) Turning Left (R.) by Numbers—One to Five!

1110. Standing: Jumping in Height with Arm Swinging Sideways.

The exercise is carried out by numbers, on the commands:

Jumping in Height with Arm Swinging Sidew. by Numbers—One to Five!

As in the preceding paragraph but with the difference that on the third count the arms are swung sideways to the Yard Position and are quickly lowered to the sides as the Spring Standing Position is assumed.

Note.—The exercise can also be carried out with Turnings as in preceding paragraph.

1111. Standing.....Jumping in Height with Leg Parting.
Jumping in Height with Leg Parting by Numbers—One to Five!

As in paragraph 1109, but with the difference that on the third count the legs fully stretched are parted sideways and immediately brought together again.

Note.—Jumping in Height can also be carried out with Arm Swinging Sideways and Leg Parting.

1112. Standing.....Jumping in Height with Arm Circling.
The exercise is carried out by numbers on the commands:
Jumping in Height with Arm Circling by Numbers—One to Five!

As in par. 1109, but with the difference that on the third count the Arm Circling takes place.

Note 1.—The exercise can also be carried out with turnings.

Note 2.—The exercise can also be carried out with Leg Parting as in preceding paragraph.

1113. Spring Standing.....Jumping in Height.
Starting Position is taken on the commands:
Heels—Raise! *Knees*—Bend!

The exercise is carried out by numbers on the commands:
Jumping in Height by Numbers—One! Two!

At count One, the body is thrown upward as in par. 1109.
At count Two the exercise is repeated, and so on.

Standing Position is returned to on the commands:
Knees—Stretch! *Heels*—Sink!

Note.—The exercise can also be carried out in the Bend, Rest, Yard or Wing, Spring Standing Positions.

1114. Spring St.: Jumping in Height with Arm Swinging Sideways.
Starting Position is taken as in par. 1113.

The exercise is carried out on the commands:
Jumping in Height with Arm Swinging Sidew. by Numbers—One! Two!

Note.—In the above Starting Position can also be carried out Jumping in Height with Leg Parting, or Leg Parting and Arm Swinging Sideways.

Breathing Exercises with Simple Arm Movements

All Breathing Exercises should be carried out at the rate of about twelve times per minute.

The Starting Position. The Exercise.

1115. Standing.....Hand Turning Outward.

The exercise is carried out on the commands:

Breathing Exercise Hands Outw.—Turn! (Inhale, par. 841.)

Hands Inw.—Turn! (Exhale.)

1116. Standing.....Arm Raising Sideways.

The exercise is carried out on the commands:

Breathing Exercise Arms Sidew.—Raise! (See par. 835.) *Arms Downw.*—Sink!

Note.—Arm Raising Forward, Forward and Upward, Sideways and Upward or Arm Circling can also be used as Breathing Exercises.

1117. Forward Walk St.....Hand Turning Outward.

Starting Position is taken as in par. 844.

The exercise is carried out on the commands:

Breathing Exercise Hands Outw.—Turn! *Hands Inw.*—Turn!

Standing Position is returned to on the command:

Feet Together—Place!

Note.—Arm Raisings can also be executed as Breathing Exercises in the above Starting Position.

1118. Yard Standing.....Hand Turning Upward.

Starting Position is taken on the command:

Arms Sidew.—Raise!

The exercise is carried out as in par. 890, on the commands:

Breathing Exercise Hands Upw.—Turn! *Hands Downw.*—Turn!

Standing Position is returned to on the command:

Arms Downw.—Sink!

Breathing Exercises with Combined Movements.

The Starting Position. The Exercise.

1119. Standing.....Heel Raising with Arm Raising Sideways.

The exercise is carried out on the commands:

Breathing Exercise Heel Raising and Arms Sidew.—Raise!

Heel Sinking and Arms Downw.—Sink!

Note.—The Heel Raising can also be carried out with Arm Raising Forward and Upward, Sideways and Upward or Arm Circling.

1120. Standing.....Heel Raising with Hand Turning Outward.
The exercise is carried out on the commands:
Breathing Exercise Heel Raising and Hands Outw.—Turn!
Heel Sinking and Hands Inward—Turn!

Note.—Heel Raising can also be carried out with Head Bending Backward.

1121. Yard St.....Heel Raising with Hand Turning Upward.
Starting Position is taken on the command:
Arms Sidew.—Raise!

The exercise is carried out as in pars. 848-890, on the commands:
Breathing Exercise Heel Rraising and Hands Upw.—Turn!
Heel Sinking and Hands Downw.—Turn!

Standing Position is returned to on the command:
Arms Downw.—Sink!

1122. Standing: Trunk Bending Backward with Hand Turning Outward.
The exercise is carried out on the commands:
Breathing Exercise Trunk Backw. Bending and Hands Outw.—Turn!
Trunk Upw. Stretching and Hands Inw.—Turn!

Note.—Trunk Bending Backw. can also be carried out with Arm Raising Sideways, Forward and Upward or Arm Circling.

1123. Stretch St.....Heel Raising with Arm Parting.
Starting Position is taken on the command:
Arms Forw. and Upw.—Raise! (See par. 885.)

The exercise is carried out on the commands:
Breathing Exercise Heel Raising and Arm Parting by Numbers—One! Two!

At count One, the heels are raised and the arms parted.
At count Two, the heels are lowered and the arms raised upward.

Standing Position is returned to on the command:
Arms Forw. and Downw.—Sink!

1124. Forward Walk St.: Rear Heel Raising with Hand Turning Outward.
Starting Position is taken on the command:
Left (R.) Foot Forw.—Place!

The exercise is carried out on the commands:
Breathing Exercise Rear Heel Raising and Hands Outw.—Turn!
Heel Sinking and Hands Inw.—Turn!

Standing Position is returned to on the command:

Feet Together—Place!

Note.—The following Breathing Exercises can also be carried out in the above Starting Position: Rear Heel Raising with Arm Circling. Head Bending Backward with Hand Turning Outward. Trunk Bending Backward with Hand Turning Outward.

CLASS ATHLETICS AND ACADEMY CHAMPIONSHIPS

CLASS ATHLETICS AND ACADEMY CHAMPIONSHIPS

FIG. 531

Presented by Harvard University to encourage class athletics. Numerals of class winning the championship in athletics are engraved each year on this shield. The first numerals to be engraved on this shield are for the class of 1922.

1125. Class Championship.—The class championship is awarded at the end of each Academic Year to the class scoring the most points in accordance with the following table:

Football,	30	Lacrosse,	15
Baseball,	15	Rifle,	15
Crew,	25	Fencing,	10
Track,	15	Gymnastics,	10
Basketball,	15	Water Polo,	10
Swimming,	10	Tennis,	10
Boxing,	10	Soccer,	10
Wrestling,	10	Hand Ball,	3

Total points.....213

1126. Record of Class Points.—The following page is inserted in order that midshipmen may keep a record of points won by their class while at the Naval Academy:

SPORTS	4th Class year				3d Class year				2d Class year				1st Class year			
Points for	1st Cl.	2d Cl.	3d Cl.	4th Cl.	1st Cl.	2d Cl.	3d Cl.	4th Cl.	1st Cl.	2d Cl.	3d Cl.	4th Cl.	1st Cl.	2d Cl.	3d Cl.	4th Cl.
Football																
Baseball																
Crew																
Track																
Basketball																
Swimming																
Boxing																
Wrestling																
Lacrosse																
Rifle																
Fencing																
Gymnastics																
Water Polo																
Tennis																
Soccer																
Hand Ball																
TOTAL POINTS																

1127. Organization and Equipment.—When class teams are organized, the number shown below for various sports should be considered the approximate number on the class squad to whom equipment is issued upon an approved list submitted by the captain of the team via the Gymnasium Officer's Office.

SPORT	1st Class	2nd Class	3rd Class	4th Class
Football	30	35	40	45
Baseball	25	30	35	40
Crew	18	18	18	18
Track	25	30	35	40
Basketball	20	25	30	35
Swimming	15	20	25	30
Boxing	21	26	31	36
Wrestling	21	26	31	36
Lacrosse	30	35	40	45
Rifle	20	25	30	35
Fencing	6	10	14	18
Gymnasium	10	15	20	25
Water Polo	16	21	26	32
Tennis	16	21	26	32
Soccer	30	35	40	45
Hand Ball	6	6	6	6
Golf	..	..	..	..

1128. Managers of Class Teams.—Each class shall elect managers for the various teams representing the class. Managers when elected will continue in office until another election is held by the class concerned. See page 558.

1129. Captains.—As soon as the team is formed the various members shall elect a captain for the season.

1130. Schedule of Games.—Since the schedule of games pertains to all classes it is necessary that it be drawn up by the athletic department. However, most schedules will be arranged as follows:

When a single schedule is required as in Football.

(1) 1 v 4
2 v 3

(2) 1 v 3
2 v 4

(3) 1 v 2
3 v 4

Where a double schedule is required as in Basket Ball.

(1)	1 v 4
	2 v 3
(2)	1 v 3
	2 v 4
(3)	1 v 2
	3 v 4
(4)	2 v 3
	1 v 4
(5)	2 v 4
	1 v 3
(6)	3 v 4
	1 v 2

1131. Fields and Courts.—These are assigned by the athletic department and where conditions are equal will not be changed. In the case of football where fields are parallel, teams should practice at opposite ends of fields. Where certain fields or courts have an advantage, teams should rotate, changes being made weekly.

1132. Coaches.—It is the general policy to have officers or instructors from the various departments in the Academy for coaches. In addition, where the number of instructors in the department of physical training will permit, an instructor from this department will be assigned. Where class sports follow after the regular season such as wrestling and boxing, members of the Varsity squad are expected to take part in coaching their class teams.

1133. Officials.—Officials to act as umpire, referee, judges, etc., will be appointed by the sport representative or officer in charge of the particular sport. Where this is not practicable, the appointments will be made by this department.

1134. Protests Against Officials.—Protests should not be made on the field of play, and without good reason. Where protests seem necessary they should be submitted to the representative in charge of the sport.

1135. Rules.—All class athletics shall be played under the rules governing the Varsity squads as far as possible. This enables a player of Varsity calibre to be transferred to the Varsity squad without having to learn a new set of rules.

1136. General Procedure of Class Teams.—The class teams shall follow the procedure of varsity squads in all that relates to spirit, methods,

purpose, and the various other qualities connected with teams and teamwork.

1137. Starting of Games.—All class games should be started promptly and teams should be in readiness at least fifteen minutes before the scheduled time of meets.

1138. Supervision of Class Athletics.—All inter-class athletics shall be under the supervision of the Athletic Officer and no contest shall be held without his permission.

1139. Eligibility of Class Teams.—Any midshipman who is not a member of the first squad is eligible for a class team. A member of the first squad is not eligible for a class team unless relieved from the first squad by the proper authority. The reason for such relief to be clearly established as being not qualified for the squad from an athletic standpoint. See par. 000.

1140. Awards of Numerals.—Certain midshipmen who have been members of championship class teams in any sport, shall be entitled to wear on their sweaters and jerseys their class numerals. These numerals are to be a standard block 3½ inches in height.

1141. The Right to Wear Numerals.—The right to wear numerals shall be determined by a Committee composed of the Captains of the class teams, the Gymnasium Officer, and a third person agreed upon by these two members of the Committee. These numerals in each sport to be awarded as nearly as practicable as the N and letters are awarded.

1142. Class Teams are Sub-Divisions of Squads.—All class teams shall be considered as sub-divisions of the various squads, and any member of a class team who is called to the squad by the head coach, must become a member of the first squad.

1143. Class Colors.—The following colors have been assigned for class athletics for uniforms, etc.,

1st class—Maroon.
2d class—Blue.
3d. class—Gray.
4th class—White.

ATHLETICS DURING FOURTH CLASS (PLEBE) SUMMER

ATHLETICS DURING FOURTH CLASS (PLEBE) SUMMER

1144. Midshipman's First Contact with Physical Training.—Soon after being assigned to a company a midshipman is ordered to the Gymnasium (Macdonough Hall) for a strength test.

1145. Examinations in Connection with Strength Test.—The Gymnasium Medical Officer examines all midshipmen who have passed through I STRENGTH REQUIREMENT test and points out defects in posture, and explains how to strengthen muscles found defective by the test.

1146. Previous Athletic Record.—Following the tests above, midshipmen are required to fill out a card showing their athletic qualifications before entering the Academy. This card is not used in assigning midshipmen to athletics, but is for the purpose of statistics and for assigning periods of training.

1147. Swimming Tests.—While certain midshipmen are being put through the above tests, etc., others are taking their first II SWIMMING REQUIREMENT TESTS. See par. 20.

1148. Getting Acquainted with Department.—As soon as midshipmen have completed their tests they are taken on a tour throughout the Gymnasium. The athletic spirit of good sportsmanship is explained; trophies won under this same spirit are pointed out to the embryo athlete. The gymnasium apparatus is demonstrated and general information on the department is given.

1149. Coaches and Instructors.—A large staff of instructors are available for instructing midshipmen. These instructors will require the strictest of obedience and attention; on the other hand they are always interested in answering questions and pointing out faults, and the newly entered midshipman should quickly become acquainted with the different sports and the instructors having charge of these sports.

1150. Gymnasium Rules.—Rules are posted in conspicuous places throughout the gymnasium and should be read to prevent injury or confusion. Midshipmen are not permitted to enter the swimming pool without first having taken a shower bath—they may not exercise on gymnasium floor in other than soft soled shoes. Dressing is prohibited

outside of authorized dressing rooms, and trunks must always be worn in leaving dressing rooms or entering pool.

1151. Prepared for Drill.—Midshipmen when ordered to the gymnasium should always come prepared for drill, this means that they are to bring swimming trunks, towel, and to wear proper shoes.

1152. Sick List, Skin Trouble, Etc.—Whenever midshipmen are unable to take part in athletic drills, swimming, etc., on account of being on the sick list, ring worm, sore throat, etc., they will request permission from their instructor to fall out of ranks; and are subject to examination by the gymnasium medical officer.

1153. Late for Drill.—When detained from arriving at the gymnasium for a drill period, midshipmen arriving late will report to instructor in charge of swimming. This instructor will further direct their movements in accordance with the orders of the day.

1154. Athletics on Sunday.—No athletics of any kind will be indulged in either by midshipmen individually or by teams until after the midday meal on Sundays.

1155. Athletic Uniforms.—Midshipmen in athletic uniform, proceeding to and from Worden Field, Race Boat Sheds, or Tennis Courts in vicinity of Dewey Basin will use Sands and McNair Roads along the water front, and not pass through other portions of the Yard.

1156. Uniforms for Athletics.—(See Regulations of U. S. Naval Academy, 1920) Paragraph 621.

1157. Salutes on Athletic Fields.—On an athletic field, those midshipmen actually engaged in athletic sports are not required to salute officers who are passing. When a regular match of football or baseball is in progress, midshipmen occupying the grand stand are not required to rise and salute passing officers All other midshipmen in the vicinity will salute in accordance with the above rules.

1158. Sweaters.—Sweaters may be worn with any athletic uniform when weather conditions or other circumstances render it necessary. For letters and numerals see pages 562 to 568.

1159. Duties of Athletic Officer, Etc.—Midshipmen should read Article 217 to 220, Regulations of U. S. Naval Academy, at first convenient opportunity. These articles give the outline of athletic administration.

1160. Record of Tests.—In taking the various tests prescribed provision is made for midshipmen to keep a copy of their own examinations. See paragraphs 19 and 22.

1161. Plebe Athletic Meets.—At the end of Plebe Summer meets are held in the out door sports that have been conducted during drill. This includes track meet, base ball, swimming, wrestling and boxing. Games are scheduled with outside teams, and the midshipmen contesting in these meets have started their career in the interest of athletics at the Academy.

1162. Inter-Battalion Meets.—During the summer regular inter-battalion meets will be held in the sports mentioned above. Each battalion should organize its own teams, appoint the captain, manager, etc., and be prepared to enter the meets on dates scheduled.

1163. Tone of Contests.—The Naval Academy has through long and hard effort earned its place as one of the leading institutions of the country. In athletics we compete with YALE, HARVARD, PRINCETON, CORNELL, and other large institutions. Our contests are strictly in a college spirit, and are governed by Intercollegiate Rules. Naval Academy teams win due to their fighting spirit. Teams play hard and do not let down in victory or defeat. New members of teams should remember to "play like a midshipman."

GOVERNMENT OF ATHLETICS

GOVERNMENT OF ATHLETICS AT NAVAL ACADEMY

CONSTITUTION OF THE MIDSHIPMEN'S ATHLETIC ASSOCIATION

I. TITLE.

An Association to be known as the MIDSHIPMEN'S ATHLETIC ASSOCIATION, shall be formed at the U. S. Naval Academy, and governed by the following constitution:

II. COLORS.

The colors of the Association shall be Navy blue and gold.

III. OBJECT.

The object of the Association shall be to promote athletic sports at the Naval Academy in accordance with such orders as the Superintendent may issue; to systematize the arrangement for athletic sports and amusements, and to bring the Navy Athletic Association and the Midshipmen's Athletic Association into such close touch and sympathy that the athletic sports at the Academy may be improved by mutual support and understanding between the Associations.

IV. MEMBERSHIP.

All Midshipmen, undergraduates, may be members of the Association

V. DUES—WHEN PAID.

The annual dues shall be fifteen dollars ($15.00), paid from the Midshipmen's accounts, three dollars each, on the last day of the months of October, November and December, and two dollars each on the last day of the months of January, February and March.

VI. MANAGEMENT OF ATHLETICS—PRECEDENCE.

The athletic affairs of the Association shall be placed in the hands of the following committee of Midshipmen in order of precedence, under supervision of the Officer in Charge of Athletics and approval of the Commandant of Midshipmen.

1. President.
2. Captain of Foot Ball Team.
3. Captain of Base Ball Team.
4. Captain of Crew.
5. Captain of Track Team.

6. Captain of Basketball Team.
7. Captain of Swimming Team.
8. Captain of Boxing Team.
9. Captain of Wrestling Team.
10. Captain of Lacrosse Team.
11. Captain of Rifle Team.
12. Captain of Fencing Team.
13. Manager of Foot Ball Team.
14. Manager of Baseball Team.
15. Manager of Crew.
16. Manager of Gymnasium Team.
17. Secretary from Second Class.
18. Treasurer from Second Class.
19. Representative of Third Class.
20. Representative of Fourth Class.

VII. TRANSACTION OF BUSINESS—QUORUM.

A quorum for the transaction of business shall consist of at least (10) members of the Committee. It shall be the duty of the President of the Association to so arrange that every member of the Committee present at the Academy and ready for duty shall be notified beforehand when and where a meeting of the Committee is to be held.

VIII. OFFICERS—METHOD OF SELECTION.

1. The Officers of the Association shall comprise a President, Secretary, and Treasurer. They shall be selected in the following manner:

2. At least two weeks prior to graduation of the first class, the second class shall convene in a class meeting and elect by majority vote a member of that class to act as President of the Midshipmen's Athletic Association during the coming year.

3. The third class shall also convene in a class meeting at least two weeks prior to graduation of the first class, and shall, by majority vote, elect a member of that class to act as Secretary of the Midshipmen's Athletic Association during the coming year, and another member to act as Treasurer of the said organization for the same period.

4. The Fourth Class shall, two weeks before graduation, elect one of the members to act as their representative during their Third Class year.

5. The Representative for the Fourth Class shall be elected at a meeting of that class held during the first month of the Academic year.

6. The selection of all Officers and Representatives is subject to the approval of the Commandant.

7. All Officers of the Midshipmen's Athletic Association shall consider it their duty to take an active interest in, and to promote all forms of athletics in which the Naval Academy competes with other institutions. Any Officer who does not do so, may be deprived of office at any meeting of the Midshipmen's Committee by a two-thirds vote of the whole Committee.

IX. ELECTION OF MANAGERS, DUTIES.

1. All managers shall be elected in the following manner:

2. Within two weeks after the beginning of the Academic year the Third Class shall elect two men to act as Assistant Managers for each of the above mentioned sports. During the season of their respective sports these Assistant Managers shall do the duties assigned them by the coaches, the manager, and the Officer in Charge of that sport or the Athletic Officer. At the end of the season a Committee of Three composed of the Head Coach, the Officer in Charge of that sport, and the Manager of the team, shall choose one of the two assistant managers to act as First Assistant Manager for the ensuing year, who will automatically become manager of the team for his first class year.

3. All managers and assistant managers are liable to removal from office for negligence of their assigned duties.

Each class shall elect managers for the various teams representing the class. Managers when elected will continue in office until another election is held by the class concerned.

XI. ELECTION OF CAPTAINS.

At the close of the season, the members of each team, that is, those of each athletic team of that year entitled to wear the "N" or letters, shall elect by a majority vote a captain for the ensuing year, subject to the approval of the Commandant of Midshipmen.

XII. DUTIES OF PRESIDENT—MEETINGS.

1. The President of the Midshipmen's Association shall keep in close touch with the President of the Executive Committee of the Navy Athletic Association, and the Commandant of Midshipmen through the Officer in Charge of Athletics.

2. He shall, once a month during the Academic year, call meetings of the midshipmen's Committee and shall preside at such meetings. In case of absence of the President, meetings may be called by the Secretary, but the presiding officer shall be according to the order of precedence given in Article VI. Neither the Secretary nor the Treasurer will ever preside at a meeting of the Committee.

3. Any member of the Committee may demand a vote by ballot on any question, and such demand shall always be granted by the presiding officer.

4. Any information that the Executive Committee of the Navy Athletic Association desires to make known to the Midshipmen shall be through the Officer in charge of Athletics to the President of the Midshipmen's Association.

5. The President of the Midshipmen's Association shall attend the meeting of the Executive Committee of Navy Athletic Association which is held on about the fifteenth of October, or such meetings where his presence is necessary, and shall bring before that Committee all matters which the Midshipmen's Committee wishes considered.

XIII. SECRETARY—MINUTES.

1. The Secretary shall keep written minutes of the transactions at all meetings of the Committee, and shall, on the first day of each month, or when called upon at any time, submit the same to the Commandant of Midshipmen.

2. At each meeting of the Committee the minutes of the preceding meeting shall be read, and if correct, approved.

3. The correspondence of the Committee shall be in charge of the Secretary and duly recorded in his books.

XV. MEETING WITH NAVY ATHLETIC ASSOCIATION.

The first business of the Committee, after organizing shall be to meet into joint session with the Executive Committee of the Navy Athletic Association; to examine into the financial affairs and other sources and allot to the various teams and sub-committees such sums of money for their use as the estimated income will justify.

XVI. BOOKS—KEPT JOINTLY.

The books of the Midshipmen's Athletic Association shall be kept jointly with those of the Navy Athletic Association, which shall be available at any time to members of the Executive Committee of the Midshipmen's Athletic Association.

XVII. JOINT AUDITING.

The Treasurer of the Midshipmen's Athletic Association shall serve on all auditing committees where joint funds from the Navy and Midshipmen's Athletic Association are concerned.

XVIII. MANAGERS TO CONSULT ATHLETIC OFFICER.

Managers of the several teams and the Chairman of the Hop Committee shall consult freely with the Athletic Officer and with the member or members of the Executive Committee, Navy Athletic Association, assigned to represent that Association in the various lines of athletics. Thus, the

Baseball Manager will consult with the member or members of the Navy Athletic Association designated by its Executive Committee to forward the interests of baseball at the Academy, and so on.

XIX. EMPLOYMENT OF COACHES.

Managers and Captains of teams shall submit recommendations relative to the employment of Coaches, but all coaches shall be decided upon and engaged by the Executive Committee of the Navy Athletic Association.

XX. ALLOTMENT OF EXPENSES.

1. As far as practicable expenses chargeable to athletics will be borne as follows:

By the Navy Athletic Association:

1. Pay and necessary expenses of coaches and assistants.
2. Pay and necessary expenses of all officials for athletic games.
3. Expenses due visits of the Academy teams to outside places.
4. Cost of prizes, medals, etc., for athletic performances.

2. By the Midshipmen's Athletic Association.

1. Guarantees and all expenses due to visiting teams.
2. Cost of all uniforms and equipments.
3. Trainers, rubbers and rubbers' material.
4. Hop expenses.
5. Reading-room expenses.
6. Moving Pictures.

XXI. UNIFORMS.

1. The kind and style of uniform to be worn by any athletic team at the Academy, shall be decided upon by the managers and captains of the teams, approved by the Midshipmen's Committee, and finally by the Commandant of Midshipmen. After a standard has once been adopted, as few changes as possible will thereafter be made.

2. No uniforms, or parts of uniforms, other than those adopted at the Academy, shall be worn by any Midshipman.

XXII. MAJOR SPORTS.

There shall be four major sports—

1. FOOTBALL,
2. BASEBALL,
3. CREW,
4. TRACK.

XXIII. AWARDS—LETTERS, NUMERALS, MEDALS, ETC.

1. Specifications of N.—Certain Midshipmen shall be entitled to wear on their jerseys and sweaters the letter N. This letter to be a standard block letter, eight inches in height for roll neck sweaters, seven inches for V-neck sweaters, and six inches for jerseys and coat-sweaters. The letter shall be worn on the middle of the breast, except on coat-sweaters on which it shall be worn on the left breast.

2. Records of Awards.—The N, letters, or class numerals, shall not be worn by any Midshipman not entitled under these rules to do so. The record of those entitled to wear them shall be kept by the Secretary of the Association.

3. Color of N.—The color of the N for the different branches of athletics shall be yellow.

4. Army Contests—Major Star—Specifications, Award.—In addition to the N, any Midshipmen participating in winning contests with West Point in a major sport may wear a five pointed star of the same color as the letter on left breast of the sweaters and jerseys; the diameter of star to be one-half the height of the letter, and to be placed with one point down and the right point on line with, and one half inch to left, of the top letter.

5. Army Contests—Minor Sports.—No stars shall ever be awarded for defeating an Army team in any minor sport, but the N may be awarded to certain minor sports in such an event. These N's to be awarded to those members actually numbered on the team who play in a winning contest against the Army, awards not to exceed two-fifths additional to members of team for substitutes who played in said winning contest.

6. N Committee on Awards.—The right to wear the N shall be determined by a Committee composed of the Captains of the first teams and the Officer in Charge of Athletics, and the third person agreed upon by two members of the Committee designated above.

7. Award of Letters, Such as BNB, Etc.—Certain Midshipmen shall be entitled to wear on their jerseys and sweaters the letter N with appropriate letters on either side to denote the respective team, viz.,

Basketball	BNB
Swimming	SNT
Boxing	BNT
Wrestling	WNT
Lacrosse	LNT
Rifle	RNT
Fencing	FNT
Gymnastics	GNT
Water Polo	WNP
Tennis	TNT
Soccer	ANF

8. **Color of BNB's.**—The color of these letters shall be yellow; the N to be a six inch block letter; the other letters to be 2½ inches by 1½.

9. Right to Wear BNB's, etc.—The right to wear these letters shall be determined by a Committee composed of the Captain of the first team, the representative of the Navy Athletic Association for that branch of athletics; and a third person agreed upon by those two members of the Committee and shall be awarded as specified below.

10. Award of Squad Letters (NA Monograms).—Those members of the various squads who have not won the major letter awarded for that sport during the season, but who, in the opinion of the coaches, have contributed materially to the development and success of the team shall be awarded the NA monogram. The total number of monograms awarded shall not exceed the number of letters awarded. This shall not be construed to mean that the number of monograms awarded shall necessarily equal the number of letters awarded, but instead, the Committee of awards shall give the monograms to those Midshipmen only whose work has been deserving of some recognition.

11. Size of NA.—The monograms shall be six inches in height, and shall consist of the letters NA in block form.

12. Major and Minor NA.—Monograms awarded for major sports shall be plain, while those awarded for minor sports shall have the distinguishing subscript letters.

13. Class Numerals—Award, etc.—Certain Midshipmen who have been members of championship class teams in any sport, shall be entitled to wear on their sweaters and jerseys their class numerals. These numerals shall be yellow, standard block, 3½ inches in height. The right to wear numerals shall be determined by a Committee composed of the Captains of the class teams, the Gymnasium Officer, and a third person agreed upon by these two members of the Committee. These numerals in each sport to be awarded as nearly as practicable as the N and letters are awarded.

14. Class Teams are Sub-Divisions of Squads.—All class teams shall be considered as sub-divisions of the various squads, and any member of a class team who is called to the squad by the head coach, must become a member of the first squad.

15. Eligibility for Class Teams.—Any Midshipman who is not a member of the first squad is eligible for a class team. A member of the first squad is not eligible for a class team until relieved from the first squad by the proper authority. The reason for such relief to be clearly established as being not qualified for the squad from an athletic standpoint.

16. Supervision of Class Athletics.—All inter-class athletics shall be under the supervision of the Athletic Officer and no contest shall be held without his permission.

17. Date of Recommending Awards—When Effective.—The Committee may make recommendations for awards within a day after the specifications for winning any letter have been fulfilled. These awards to be effective on publication of Commandant's Order approving recommendations.

SUMMARY OF AWARDS

Football	
N*	To those Midshipmen participating in a winning contest against the Army. (Par. 4.)
N	Awarded for participating in Army Game. In case there is no game with the Army, the N may be awarded by the above named Committee. (Par. 6.)
NA Monogram	Awarded by Committee (Par. 9 & 10) for material aid in success of first team.
Class Numerals	Awarded by Committee (Par. 13) to championship class team.
Baseball	
N*	To those Midshipmen participating in a winning contest against the Army. (Par. 4)
N	Awarded for participation in Army game. In case there is no game with Army, the N may be awarded by Committee (Par. 6).
NA Monogram	Awarded to aid in success of first team. (Par. 9 & 10.)
Class Numerals	To Championship Team. By Committee. (See Par. 13.)
Crew	
N*	To those Midshipmen participating in a winning contest against the army. (See Par. 4.)
N Cross-oar	Members of a winning crew at the Regatta of the American Rowing Association in which at least two other University crews compete, or a crew breaking the record for the Naval Academy course in a scheduled race, shall be entitled to wear a "cross oar" in addition to the N. (See Par. 6.)
N	Awarded to the first Varsity Crew. (Par. 6.)
NA Monograms	Awarded to members of second varsity crew, and of the 150 lb. crew. A "cross oar" may be worn if won under conditions specified above regarding Henley Regatta.
Class Numerals	Awarded to members of championship class crew. (Par. 13), and to plebe crew representing the Naval Academy in races with organized Freshmen crews.

Track

N*	For individual Midshipmen winning first place in a dual meet in which Navy wins against Army.
N	For individual Midshipmen who win as much as second place in a dual meet in which Navy wins against Army.
N	For individual Midshipmen who win first place in a dual meet against Army.
N	For individual Midshipmen who win first place in a championship intercollegiate meet, in which at least four (4) representative colleges are represented, or in the championship intercollegiate relays (such as Penn-Relays).
N	Wins eighty per cent of possible points in any one event, in at least four (4) dual meets during the season.
N	Member of relay team which wins at least four (4) relays during the season, or wins a relay against the Army.
N	Breaks or equals a Naval Academy or inter-collegiate record.

In addition to qualifying as above, all Midshipmen eligible for letter, must qualify sometime during the season by making a record in any event as prescribed by the following table.

100 yds. in 10⅖ seconds. 220 yds. in 23 seconds.
440 yards in 52 seconds. 880 yards in 2 mi. 5 seconds.
1 mile 4 minutes 35 seconds.
1 mile relay, for each member, 52⅗ seconds.
120 yards High Hurdles, 16⅕ seconds.
220 yards Low Hurdles, 27⅕ seconds.
High Jump, 5 feet 7 inches.
Broad Jump, 20 feet.
Discus Throw, 105 feet.
Javelin Throw, 140 feet.
Pole Vault, 11 feet.
Shot Put, 39 feet.

NA Monogram	Awarded for aid in success of first team (Par. 9 & 10.).
Class Numerals	To Championship Class team (Par. 13).

Note: Interpretation of class numerals for previous years has been—A man to win numerals must be on class *championship* team. It is required that he be the best man in any event (Score most points in any one event).

In case any man under above has gained his numeral in more than one event the second best man in either of these events would be awarded his numeral.

Basketball

N	To those members, not to exceed seven, who play in a winning contest against the Army. In case there is no Army Game N's may be awarded to those members of the team who play in three-fourths of the games, at least twelve games to have been played during the season, every game having been a victory. The number of N's under this clause shall not exceed six. (Par. 5 & 6.)
BNB	Those members of the team. not to exceed seven, who have played in three-fourths of games during season when the team has not accomplished the specifications for winning the full N.
BNAB	Awarded for aid in success of first team. (Pars. 10, 11 & 12.)
Class Numerals	To Championship class team. (Par. 13.)

Swimming

N	Winning contest against Army. (Par. 5 & 6.) To those members of the swimming team who break an established Academy record or intercollegiate record or win first place in an intercollegiate meet, shall be awarded the N.
SNT	To those members of the swimming team who average better than second place in one event provided there are at least three meets per season.
SNAT	Awarded for aid in success of first team.
Class Numerals	To championship class team. (Par. 13)

Boxing Team

N	Winning contest against Army. (Par. 5 & 6.) Midshipmen of the boxing team who are in all meets of season, (season consisting of at least four meets), and win all of their bouts; or, if the team goes to the intercollegiate meet only to members winning championship, the previous clause being void.
BNT	To members who take part in two-thirds of the meets with other college or university teams and who win a majority of their matches. The total of awards not to exceed seven.

BNAT	Monograms shall be awarded according to Paragraph Nine of this Article.
Class Numerals	To Championship Class Team. (Par. 13.)
Wrestling	
N WNT WNAT	Awards will be made for wrestling under the same specifications as for boxing.
Class Numerals	
Lacrosse	
N	Winning contest against Army (Par. 5 & 6.). Winning the recognized intercollegiate championship. Not to exceed 14.
LNT	To members of the lacrosse team who have played in two-thirds of the regularly scheduled games of the season. Total number of awards not to exceed sixteen. (Par. 7.)
LNAT	See Paragraphs 10, 11, 12.
Class Numerals	Awarded to Championship Team. (Par. 13.)
Rifle	
N	In event of a winning match with the Army or winning first place in the National Match.
RNT	To members winning in a majority of meets, provided there are at least three meets in the season.
Class Numerals	Awarded to Championship Class Team. (Par. 13.)
Fencing	
N	Winning contest against Army. (Par. 4.) Winning first place in the intercollegiates.
FNT	To members of the Fencing Team who take part in two-thirds of the regularly scheduled matches with colleges or Universities, and who win a majority of their matches.
Class Numerals	Awarded to Championship Class Team. (Par. 13.)
Gymnasium	
N	Winning contest against Army. (Par. 4.) Winning first place at the intercollegiates.
GNT	To members of the Gymnasium Team who participate in two-thirds of the scheduled meets with other colleges and who win a majority of points possible for one individual in his particular event. The total number of awards not to exceed six.
Class Numerals	Awarded to Championship Class Team. (Par. 13.)
Water Polo	
N	Winning contest against Army. (Par. 4.) Intercollegiate championship not to exceed seven.

WNP	To those members of the water polo team who participate in two-thirds of the scheduled meets during a season consisting of at least three meets, and who win a majority of their meets.
Class Numerals	Awarded to Championship Class Team. (Par. 13.)

Note: The Constitution as printed above is subject to change, and is not an authentic copy of Constitution now in force, but is printed as a guide to midshipmen relative to awards and athletic government.

1162. Rules Governing Naval Academy Athletics.—

1. FOOTBALL	Football Rules as Recommended by the Rules Committee of National Collegiate Athletic Association.
2. BASEBALL	Official Playing Rules Professional Base Ball Clubs, as adopted by National League and American Leagues.
3. CREW	Rules, National Association of Amateur Oarsmen of America.
4. TRACK & FIELD	Rules of Competition. Intercollegiate Association of Amateur Athletics of America.
5. BASKETBALL	Official Rules as codified and adopted by Joint Committee Representing the National Collegiate Athletic Association, Young Men's Christian Association, Amateur Athletic Union.
6. SWIMMING	Swimming Rules, Intercollegiate Swimming Association.
7. BOXING	Boxing Rules, Intercollegiate Boxing Association of America.
8. WRESTLING	Wrestling Rules, Intercollegiate Wrestling Association.
9. LACROSSE	Lacrosse Rules & Regulations. United States Intercollegiate Lacrosse League.
10. RIFLE	Rules of National Rifle Association, as arranged by the Intercollegiate Association of Affiliated Rifle Clubs.
11. FENCING	Rules of Intercollegiate Fencing Association.
12. GYMNASTICS	Rules, Intercollegiate Association, Amateur Gymnasts of America.
13. WATER POLO	Water Polo Rules, Intercollegiate Swimming Association.
14. TENNIS	Rules of United States Lawn Tennis Association as arranged by Intercollegiate Lawn Tennis Association.
15. SOCCER	Official Soccer Football Rules, of United States Football Association and Intercollegiate Soccer Association.
16. HAND BALL	Rules, American Hand Ball.

17. GOLF — The Rules of Golf, as adopted with amendments concurred in by the Royal and Ancient Golf Club and the United States Golf Association, as used by Intercollegiate Golf Association.

1163. History of Worden Field.—Worden Field was named after Commodore John L Worden, famous commander of the Monitor. He was Superintendent in 1869. Worden Field was acquired in 1890. The New addition to the Naval Academy was called "Oklahoma" because there was such a stampede for the new officer's houses located along Upsur Road.

1164. History of Farragut Field.—Named in honor of Admiral David Glasgow Farragut, famous in the Civil War. The field is comparatively new, having been made on filled in ground. The present grand stand was used for the first time in 1911, and since then the stand and field have been improved and enlarged from time to time.

Lawrence Field.—Established by Admiral H. B. Wilson, 19 April 1922, in honor of Captain James Lawrence, U. S. Navy, whose dying words, "Don't give up the ship," have become one of the watchwords of the Navy.

Macdonough Hall (Gymnasium).—Original gymnasium was established by Admiral David D. Porter in 1865 in old Fort Severn. Later this old fort was replaced by Luce Hall, which in 1920 became known as MacDonough Hall.

1165. Organization of Sports on Intercollegiate Basis.—

1890—Football	1907—Lacrosse
1901—Baseball	1907—Rifle
1893—Crew	1896—Fencing
1892—Track & Field	1907—Gymnasium
1907—Basketball	1920—Water Polo
1912—Swimming	1909—Tennis
1920—Boxing	1920—Soccer
1910—Wrestling	(1908)—Handball*
	(1908)—Golf.*

* Sports introduced but not for Varsity Competition.

For the above dates, the sports were organized on inter-class or inter-battalion basis earlier in many cases, but first Varsity games are given for these dates.

ATHLETIC GOVERNMENT IN THE FLEET

1166. Fleet Athletics.—The following extract from the Fleet Athletic Regulations will explain the government of athletics—

Fleet Athletic Board: The board shall be constituted as follows: A captain and a Commander, appointed by the Commander in Chief; a representative from each Division of Battleships, nominated by the Division Commander; a representative from the Torpedo Flotilla, nominated by the Flotilla Commander; a representative from the Auxiliary Division, nominated by the Division Commander; a representative from the Mining Division, nominated by the Division Commander; and the Fleet Athletic Officer.

1167. Board Meetings.—The board will meet at the call of the chairman, to make recommendations to the Commander in Chief upon all matters relating to Athletics in the Fleet, such as changes in rules, methods of determining contents, trophies and finances.

Protests and claims not settled otherwise will be referred to the Board, whose decision, when approved by the Commander in Chief, is final.

1168. Fleet Athletic Officer.—The fleet Athletic Officer shall be Secretary of the Board. He shall keep minutes of their meetings and complete records of all official Athletic Events in the Fleet.

1169. Ship's Athletic Officers.—Commanding Officers shall appoint an athletic officer who will be in general charge of all athletics on board his ship, and shall also appoint an officer in direct charge of each of the following branches of athletics: (1) boat racing; (2) football; (3) baseball; (4) track and swimming; (5) basketball; (6) boxing and wrestling; and (7) gymnasium athletics. These officers will be assistants to the athletic officer and shall act as coaches for their teams. Such coach or other officer will always be in charge of the team during the match games.

It will be the duty of the athletic officer to confer with his assistants and make recommendations to his Commanding Officer that will encourage, promote, and develop athletics; and to see that orders and regulations pertaining to athletics are carried out.

The monthly roster of officers submitted in accordance with Fleet Regulations, shall show the branch of athletics to which the various officers may be assigned.

Officers in charge of different branches of athletics will prepare a list of men to go ashore to take part in athletic events, or to practice.

1170. Athletics and Ship's Duty.—It is a mistake to think that athletics need interfere with ship's duty. This is covered as follows:

Commanding Officers are directed to so arrange the watches of coaches and men who stand watch, that no hardship will be worked upon the other watch standers, by relieving those who participate in athletic preparation or contests.

1171. Rules Used in the Fleet.—Except where specifically stated to the contrary, the Rules of the Amateur Athletic Union shall govern all athletic contests.

Such rules, as are above referred to under the various branches of Athletics, shall be adhered to in so far as they do not conflict with any Fleet Regulations or other orders issued by the Commander in Chief.

1172. Purpose of Fleet Athletics.—The purpose of athletics on board ship is to offer to a large number of men healthful exercise and amusement.

1173. Encouragement.—The commanding officer shall encourage the men to engage in athletics, boxing, boating, and other similar sports and exercises. When the weather and other circumstances permit, he shall establish in the routine of exercises and drills a regular period for swimming, such exercise to include every enlisted person on board, except those excused by the surgeon.

1174. Teams Ashore.—Whenever circumstances permit, athletic parties shall accompany teams engaged in match games. Such parties may be sent ashore on duty in the uniform of the day and shall be marched in military formation under charge of any officer who shall wear side arms and be responsible for the conduct of the parties from time of leaving the ship until their return. He shall be assigned a patrol who shall prevent unsportsmanlike conduct of members of his party and suppress rowdyism on the part of the spectators.

1175. Prohibitions.—No enlisted man while attached to any ship of the Fleet, shall engage in any form of Athletic sport over which the Commander in Chief has no cognizance. Duly authorized contests with civilians such as baseball and basketball games while at Navy Yards, and other similar events, will be permitted and encouraged. No civilian shall be permitted to take part in athletic events on board ship.

1176. Medical Officer.—In contests aboard ship, a medical officer of the ship shall be present. In contests ashore, a medical officer will be detailed by the Commander in Chief to attend. This officer shall have authority to stop any contest if he deems necessary for professional reasons. He shall be specifically notified of the duty and attendant authority.

1177. Medical Examinations.—It is forbidden any man to enter a boxing contest until he shall have been examined within forty-eight hours of the contest, by a surgeon of the ship to which he is attached, and pronounced physically fit for such contest. It is the duty of the contestant to obtain a certificate from the surgeon making the examination, and to present the same at the time of weighing in.

1178. Officials.—To facilitate the selection of competent Referees, Judges, and Umpires, each ship shall be prepared to submit, when requested, a list of its officials who are qualified to act in these capacities in the different contests provided for in these athletic rules.

ATHLETIC GOVERNMENT IN GENERAL

1179. History.—"Athletics" according to best authorities was first founded in the Idaei Dactyli, B. C. 1453. However, the actual starting point is supposed to have been established by Hercules in honor of Jupiter Olympus, after a victory over Augeas, B. C. 1222. Dying down, they were again instituted by Iphitus in B. C. 884.

1180. Early Olympic Games.—At the Olympic Games, which were held at Olympia every fourth year (fifth according to some authorities) there were five chief events, known as quinquertium, but now known as the Pentathlon; these were

Running
Leaping
Wrestling
Boxing
Disc-throwing.

It was considered the highest honor attainable to win all five events.

1181. Present Day Olympic Games.—The final word in amateur athletics results from victories at the Olympic Games. The American Olympic Association recently organized has the following for its object:

To be representative of amateur sports and organizations devoted thereto in the United States for the purpose of assuring continued interest in Olympic Games and more particularly to constitute reasonably in advance of each Olympia an American Olympic Committee, which shall have jurisdiction of all matters pertaining to the participation of the United States therein.

1182. College Athletics.—College athletics became established in 1857 when Cambridge University sports were founded. These were known as Inter-varsity sports.

1183. American College Athletics.—The National Collegiate Athletic Association is composed of one hundred seventy-five leading colleges and universities enrolled in this Association which agree to control student athletic sports, as far as may be necessary, to maintain in them a high standard of personal honor, eligibility, and fair play, and to remedy whatever abuses may exist. The following associations come under the N. C. A. A.

Intercollegiate Amateur Athletic Association of America.
Western Intercollegiate Conference.
Missouri Valley Conference.
Kansas Intercollegiate Athletic Conference.
Rocky Mountain Faculty Athletic Conference.
Pacific Northwest Intercollegiate Conference.

COLLEGE COLORS OF NAVY'S OPPONENTS

Amherst College, Mass.	Purple and white.
Bethany College, W. Va.	White and green
Bucknell University, Pa.	Orange and blue
Carnegie Inst. of Tech., Pa.	Tartan Plaid
Clemson Agri. College, S. C.	Purple and orange
College City of N. Y., N. Y.	Lavender
Catholic Univ. of America, D. C.	Carnelian and white
Colgate Univ., N. Y.	Maroon
Columbia Univ., N. Y.	Light Blue-White
Cornell Univ., Ithaca	Carnelian-White
Dartmouth College, N. H.	Green
Dickinson College, Pa.	Red and white
Fordham Univ., N. Y.	Maroon
Georgetown Univ., D. C.	Blue and grey
Georgia Sc. of Tech., Ga.	Old gold and white.
George Washington Univ., D. C.	Buff and blue
Haverford College, Pa.	Scarlet and black
Harvard University, Mass.	Crimson
Hobart College, N. Y.	Orange and Purple
Johns Hopkins Univ., Md.	Black and old gold
Lehigh Univ., Pa.	Brown and white
Lebanon Valley Col., Pa.	Blue-gray
Lafayette College, Pa.	Maroon and white
LaSalle College, Pa.	Dark blue and gold
Mass. Inst. Tech., Mass.	Cardinal red and silver gray
Marietta College, Ohio	Navy blue and white
Notre Dame Univ., Ind.	Old gold and marine blue
Penn. State College, Pa.	Navy blue and white
Polytechnic Inst., Brooklyn, N. Y.	Blue and gray
Princeton Univ., N. J.	Orange and black
Rutgers College, N. J.	Scarlet
Swarthmore College, Pa.	Garnet
Syracuse College, N. Y.	Orange
Tufts College, Mass.	Brown and blue
Univ. of N. C., N. C.	White and blue
Univ. of Maryland	Maroon and black
Univ. of Penn., Pa.	Red and blue
Univ. of Pittsburgh, Pa.	Blue and gold
Univ. of S. C., S. C.	Garnet and black

Ursinus College, Pa.	Red, old gold and black
U. S. Military Academy, N. Y.	Black, gold and gray
Virginia Poly. Inst., Va.	Red, white and yellow
Virginia Military Inst., Va.	Red, white and yellow
Vanderbilt Univ., Tenn.	Black and gold
Wash. and Jeff. College, Pa.	Red and black
Wash. and Lee College, Va.	Blue and white
Washington State Coll., Wash.	Crimson and gray
Villanova College, Pa.	Navy blue and white
Western Reserve Univ., Ohio.	Crimson and white
West Virginia Univ., W. Va.	Old gold and blue
West Virginia Wesleyan	Yellow and black
Williams College, Mass.	Royal Purple
Yale University, Conn.	Blue

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